Supreme Court, U.S.
FILED
MAY 4 1989
JOSEPH F. SPANIOL, JR.
CLERK

88-1923

In The

SUPREME COURT OF THE UNITED STATES

October Term, 1989

CITIZENS OF ILLINOIS,
Petitioners,

vs.

UNITED STATES NUCLEAR REGULATORY COMMISSION,
Respondent

and

COMMONWEALTH EDISON COMPANY,
Intervening Respondent

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT

Mr. JOHN STAINTHORP, Esq.
People's Law Office
343 S. Dearborn Street
Suite 1607
Chicago, Illinois 60604
312-663-5046
Attorney for Petitioners

QUESTION PRESENTED FOR REVIEW

The question presented is:

Whether the Court of Appeals erred in concluding that it had no jurisdiction to review Respondent's bare denial, without a technical review, of a petition requesting that enforcement actions be taken to ensure the safe operation of several nuclear power plants, when the denial of the petition without a technical review was a breach of the agency's statutory responsibilities.

PARTIES BEFORE THE SEVENTH CIRCUIT

Jacob Aronov
Eckhard Festag
David Kraft
Susan Michetti
Patricia Schaffner
Abe Sklar

United States Nuclear Regulatory Commission

Commonwealth Edison Company

TABLE OF CONTENTS AND AUTHORITIES

Page

Question Presented for Review.....i

List of All Parties before the Seventh Circuit.....i

Table of Contents and Authorities.....ii

Statement Pursuant to Rules 21(d)(e)(f).....iii

Statutes and Regulations involved.....iv

Statement of the Case.....2

Argument.....5

Conclusion.....8

Appendix A. Decision of the Court of Appeals for the Seventh Circuit.....A-1

Appendix B, Citizens of Illinois' Petition.....B-1

Appendix C. Director's Decision DD-87-2.....C-1

Statements Pursuant to Rules 21(d)(e)(f)

The decision of the Court of Appeals for the Seventh Circuit is reported at --F.2d- and is attached hereto as Appendix A.

Jurisdiction of this court is invoked pursuant to this court's power to review a final decision of a United States Court of Appeals.

The original decision of the Court of Appeals was dated February 3, 1989, and denied rehearing En Banc.

Jurisdiction is conferred on this court by 28 USC Sec. 1254.

STATUTES AND REGULATIONS INVOLVED

28 U.S.C. ¶2342. Jurisdiction of court of appeals

The court of appeals (other than the United States Court of Appeal for the Federal Circuit) has exclusive jurisdiction to enjoin, set aside, suspend (in whole or in part), or to determine the validity of–....

(4) all final orders of the Atomic Energy Commission made reviewable by section 2239 of title 42;

42 U.S.C. ¶2239. Hearings and judicial review

TRANSFER OF FUNCTIONS

The Atomic Energy Commission was abolished and all functions under this section were transferred to the Nuclear Regulatory Commission and the Administrator of the Energy Research and Development Administration by sections 5814 and 5841 of this title.

5 U.S.C. ¶701(a)

(a) This chapter applies, according to the provisions thereof, except to the extent that-

(1) statutes preclude judicial review; or

(2) agency action is committed to agency discretion by law.

10 CFR ¶2.206

(a) Any person may file a request to institute a proceeding pursuant to section 2.202 to modify, suspend, or revoke

a license, or for such other action as may be proper....

(b) Within a reasonable time after a request pursuant to paragraph (a) of this section has been received, the Director of the NRC office with responsibility for the subject matter of the request shall either institute the requested proceeding in accordance with this subpart or shall advise the person who made request in writing that no proceeding will be instituted in whole or in part, with respect to his request, and the reasons for the decision.

10 CFR Part 50, Appendix J

I. INTRODUCTION

One of the conditions of all operating licenses for water-cooled power reactors as specified in ¶50.54(o) is that primary reactor containment shall meet the containment leakage test requirements set forth in this appendix.

No.

In The

SUPREME COURT OF THE UNITED STATES

October Term, 1989

CITIZENS OF ILLINOIS,
Petitioners,

vs.

UNITED STATES NUCLEAR REGULATORY COMMISSION,
Respondent,

and

COMMONWEALTH EDISON COMPANY,
Intervening Respondent

On Writ of Certiorari to the United States Court of Appeals for the Seventh Circuit

PETITION FOR WRIT OF CERTIORARI

To The Honorable William H. Rehnquist, Chief Justice, and to the Honorable Associate Justices of the Supreme Court of the United States:

The Petitioners, Citizens of Illinois, respectfully pray that a writ of certiorari issue to review the judgment and order of the United States Court of Appeals for the Seventh Circuit in this matter.

STATEMENT OF THE CASE

This case concerns testing of tightness of containment systems of nuclear power plants. The measure of tightness is the amount of gas, in per cent, that would be released into the environment in one day from a building containing a nuclear reactor ("containment building") under circumstances imitating a nuclear accident. This measure is called a "leak rate," and the requirements of containment leak rate testing have been provided by Appendix J to 10 CFR, Part 50.

The Petition alleged that several fraudulent and deficient leak rate tests of nuclear containments were conducted in Illinois in 1981-83 (Zion, 1981 test; Zion, 1983 test), and that an emergency relief petition of Citizens Against Nuclear Power of June 5, 1984, complaining about Zion tests resulted in the NRC shut down order of July 16, 1984, for repair and retesting of the Zion nuclear power plant. Among other violations, the operator manipulated the test data and calculations to obtain an acceptable low value of leak rate. The NRC evaluation of the test data revealed that the leak rate of the Zion containment was unacceptably high.

The instrument of the operator's manipulation was a computer program which contained options for alteration of the test data for the purpose of calculation of a desirable value of leak rate. About a third of the data actually used for calculating the underestimated value of actual leak rate during the November, 1983, test, was altered.

Initially, the NRC denied esxistence of such computer programs. At a public meeting on October 17, 1985, the NRC was presented with evidence of such programs. At the same meeting, the NRC was presented with numerical examples using actual test data which substantiated the obvious fact that alteration of the data of the kind that these computer program can do, may misrepresent an actual unacceptably high leak rate as acceptable. Thus, to the detriment of public safety, an unlawful operation of a nuclear containment whose leak rate has not been proven within acceptable limits, would be allowed contrary to Appendix J to 10 CFR, Part 50.

The NRC promised to consider the matter of computer programs but never responded to the numerical examples nor terminated the practice of using options altering the data.

In August, 1986, an emergency relief petition was filed with the NRC by several residents of Illinois ("Citizens of Illinois") requesting that the operator of the Zion nuclear power plant show cause why leak rate test results obtained using the program capable of alteration of the data are valid. The petition requested that the NRC review and respond to the evidence showing that data alteration may lead to gross misrepresentation of the actual leak rate.

The office of NRR (Nuclear Reactor Regulation) of NRC is under a statutory obligation to review petitions under Paragraph 2. 202 of 10 CFR. The Director's Decision responding to the petition was issued in February, 1987. It

denied the review of most of the points presented by petitioners under pretext that these matters had been reviewed previously. However, the cited references contain no technical reviews. Thus, the matter of permissibility of data alteration received no technical review.

Moreover, with the full knowledge to the contrary from numerical examples and from the experience of the Zion 1983 test, the NRC set forth an obviously anti-scientific claim that the data alteration is an acceptable method to calculate the leak rate when the test conditions are stable. The fallacy of the claim is self evident when one examines the numerical examples and the Zion, 1983, test experience. the numerical examples assumed ideal stable conditions, and the Zion test was performed under stable conditions. Nevertheless, calculations with the altered data produced substantially different results which even NRC acknowledged to be incorrect.

In August, 1987, several residents of Illinois ("Citizens of Illinois") petitioned the United States Court of Appeals for the Seventh Circuit pursuant to 28 U.S.C. ¶2342(4) to review the Director's Decision.

On February 3, 1989, the Appellate Court denied the review for want of jurisdiction.

ARGUMENT

THE DECISION OF THE COURT OF APPEALS DISMISSING THE PETITION FOR WANT OF JURISDICTION WAS ERRONEOUS IN THAT IT FAILED TO CONSIDER THE PARTICULAR CIRCUMSTANCES OF THE CASE INDICATING GROSS VIOLATIONS OF STATUTORY OBLIGATIONS, AND FAILED TO TAKE THE PETITIONERS' ALLEGATIONS AS TRUE IN DETERMINING WHETHER THE NRC PROPERLY DENIED THE PETITION.

For many years Courts of Appeals routinely reviewed decisions of the NRC denying enforcement of ¶2.202 petitions. Subsequently, this court in *Florida Power and Light Co. v. Lorion*, 470 U.S. 729 (1985) questioned whether, in light of *Heckler v. Chaney*, 470 U.S. 821 (1985) such decisions were reviewable. On remand, in *Lorion*, 785 F.2d 1038, 1041 (D.C. Cir. 1986) the court reviewed the contents of the petition without deciding on the question of jurisdiction.

Subsequently, the First Circuit in *Massachusetts Public Interest Group, Inc. v. United States NRC*, 852 F.2d 9, 15 (1st Cir.1988)[hereinafter *MassPIRG*], held that such NRC decisions were not reviewable, and the Seventh Circuit, in this case, agreed.

The Administrative Procedure Act provides for reviewability of all final actions of governmental agencies in general by appropriate courts with the exception of when an agency

action (or inaction) is committed to agency discretion by law, 5 U.S.C. ¶701(a). The Supreme Court in *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 410 (1971) noted that this "very narrow" exception is applicable only where agency statutes are drawn so broadly that they provide no law to apply.

In *MassPIRG* the court held that neither the Atomic Energy Act of 1954 nor 10 CFR contain a meaningful standard for review of NRC nonenforcement decisions related to the health and safety of the public. However, the same court, in the same case explicitly stated:

> "The courts may review NRC decisions which undermine its statutory responsibility to protect 'the health and safety of the public'," 852 F.2d 9.

If the latter factor were considered in the present case, the Seventh Circuit should have reviewed the NRC's denial. If a containment leak rate determined from test data without the data manipulations that can be done using the options of the computer program in question, is, in fact, abnormally high, then a Chernobyl type disaster may result from a reactor accident. To allow data alteration options means granting a *carte blanche* to an operator of a facility for fraudulent "determination" of any low value for leak rate he might desire, an invitation to fraudulent testing.

The court acknowledged in its decision that petitioners claimed that they provided sufficient law, in the form of reg-

ulations for the court to apply, and that "[T]he NRC failed to respond to petitioners' citations to these regulations." For example, 10 CFR Part 50 mandates that a technical review of emergency relief petitions be done by the Agency. However, the Agency failed to provide a technical review of this Petition, and, in defiance of all scientific and engineering standards of ethics, made knowingly false statements without any attempt to substantiate their claims.

Other courts take allegations of petitioners as true until a review establishes the truth. The Seventh Circuit, however, claimed that "the NRR investigated the claims raised in the petition and.... found them to be without merit."

Given the evidence of several deficient leak rate tests, shutdown of nuclear facilities, changes in testing methodology, and extreme importance of the matter for public safety this statement had no basis whatsoever.

Symptomatically, the court completely overlooked the fact that certain options of computer programs may alter the data for the purpose of "calculating" knowingly wrong low values of leak rate, and that such "calculations" were actually used during the Zion, 1983, test. Pages 7-8 of the decision address various issues at length but the issue which is at the gist of the petition has nowhere been addressed.

CONCLUSION

The decision of the Court of Appeals granted absolute discretion to the NRC regardless of violations committed, and regardless of the strength of the Petition's allegations.

This decision abdicated the responsibility of the court to control agency's actions, and is foreign to the concept of the rule of law.

This Court should grant certiorari to resolve conflicts among the lower courts as to when an agency determination is revieable, and to correct clear errors by the United States Court of Appeals for the Seventh Circuit.

Respectfully submitted,

JOHN L. STAINTHORP
343 S. Dearborn St.
Suite 1607
Chicago, Illinois 60604
312-663-5046
Attorney for Petitioners

In the

United States Court of Appeals

For the Seventh Circuit

No. 87-1732

JACOB ARNOW, ECKHARD FESTAG,
DAVID KRAFT, SUSAN MICHETTI,
PATRICIA SCHAFFNER, and ABE SKLAR,

Petitioners,

v.

UNITED STATES NUCLEAR
REGULATORY COMMISSION,

Respondent,

and

COMMONWEALTH EDISON COMPANY,

Intervening Respondent.

Petition for Review of an Order of the
United States Nuclear Regulatory Commission

ARGUED APRIL 5, 1988—DECIDED FEBRUARY 3, 1989*

---

* Pursuant to Circuit Rule 40(f), this opinion has been circulated among all judges of this court in regular active service. No judge favored a rehearing in banc on the question of this court's jurisdiction to review nonenforcement decisions of the Nuclear Regulatory Commission. Judge Cudahy did not participate in the consideration or decision of this case.

Before RIPPLE, MANION, and KANNE, *Circuit Judges.*

RIPPLE, *Circuit Judge.* The petitioners, various persons residing in Illinois,[1] seek review of a final order of the respondent, the Nuclear Regulatory Commission (NRC),

[1] The petitioners in this case were captioned "Citizens of Illinois." However, as the NRC points out in its brief, the "petition was filed by a number of individuals, not by any organization." Respondent's Br. at 3 n.2. The government requests only that the petitioners be listed individually. We note that appeals seeking review of agency decisions are controlled by Rule 15 of the Federal Rules of Appellate Procedure. Rule 15 requires that "the petition [for review] shall specify the parties seeking review and shall designate the respondent and the order or part thereof to be reviewed." Fed. R. App. P. 15(a). We believe that the petitioners have met the strictures of Rule 15. *Cf. Torres v. Oakland Scavenger Co.*, 108 S. Ct. 2405, 2407 (1988) ("failure to name a party in the notice of appeal is . . . a failure of that party to appeal"); Fed. R. App. P. 3(c) ("An appeal shall not be dismissed for informality of form or title of the notice of appeal."). The petition for review filed with this court states that "the full names of every party or amicus called collectively as "CITIZENS" or "APPELLANT" is stated in Exhibit A." Exhibit A contains the signatures of the ten individuals who filed the original petition with the NRC. *See* Fed. R. App. P. 15(a) ("If two or more persons are entitled to petition the same court for review of the same order and their interests are such as to make joinder practicable, they may file a joint petition for review and may thereafter proceed as a single petitioner."). Counsel for the petitioners has informed the court by affidavit that he represents six of the original petitioners. The four other original petitioners have not entered an appearance before this court. *See* Circuit Rule 12(c). Accordingly, we order, *sua sponte*, that the docket entry for this case be altered to list the names of the six individuals who filed the original petition with the NRC and are represented by counsel.

We also note that the petition did not name the United States as a party respondent. Under the Hobbs Act, 28 U.S.C. § 2344, the United States "shall be" a party. All subsequent pleadings have been served on the United States, and the government acknowledges that, under Federal Rule of Appellate Procedure 15(a), the initial defect is not fatal. *See* Respondent's Br. at 2 n.1.; Fed. R. App. P. 15(a) ("The United States shall . . . be deemed a respondent if so required by statute, even though not so designated in the petition.").

denying their request for issuance of an order to show cause why certain nuclear power plants owned and operated by the intervening respondent, Commonwealth Edison Company (CECo), should not be suspended from operation and retested. The petitioners' primary concern is that the containments of those nuclear power plants might be inadequate to prevent the spread of radioactive material during a nuclear accident. In denying the petition, the Director of the NRC's Office of Nuclear Reactor Regulation (NRR) determined that the concerns of the petitioners were groundless. Because we hold that section 701(a)(2) bars our review, we deny the petition for want of jurisdiction.

I

Background

A. *Procedural Posture*

The petitioners commenced this action by filing a petition with the NRC on August 30, 1986. The petition, captioned an "Emergency Relief Petition," alleged that deficient leak-rate testing of nuclear containments at CECo nuclear power plants had created an unsafe situation. The petition requested the NRC to issue an order to show cause upon CECo to explain "why the operating license of the Unit 1, Zion Nuclear Power Plant, and same of the Unit 1, LaSalle County Nuclear Power Plant, and same of the Unit 1, Byron Nuclear Power Plant should not be suspended and containment systems thereof be retested in accordance with Appendix J to 10 C.F.R., Part 50." R.D503 at 1.[2]

---

[2] Specifically, the petition alleged that the testing at the CECo nuclear power plants was defective for five reasons. These five reasons were stated as follows:

(1) The Zion tests used the incorrect weighting coefficients, which was confirmed by the failure of the verification test;

(Footnote continued on following page)

On October 22, 1986, Harold C. Denton, the Director of the NRR, acknowledged receipt of the petition by publishing a notice in the Federal Register. At that time, he denied the petitioners' request for emergency relief, but noted that the NRC would review the petition and would issue a formal ruling within a reasonable time. *See* Petitioners' App. at 26 (copy of notice filed with the Office of the Federal Register). In a written decision on February 10, 1987, he denied the petition. The Director filed the decision with the office of the Secretary of the NRC. The NRC declined to undertake a discretionary review and therefore the Director's decision became final agency action on March 10, 1987.[3] The petitioners timely filed

---

[2] *continued*

(2) The computer programs used by CECo in the tests allowed impermissible deletion and alteration of data recorded during the test;

(3) Data produced during the Zion 1983 test had in fact been substantially altered and there existed a possibility of using these computer programs to diminish the calculated leak rates for meeting the allowable values;

(4) The tests did not comply with 10 C.F.R. Part 50, App. J in that a test of the Zion containment system in July-August 1984 was followed by a failing verification test and that the NRC thereafter allowed an illegal short duration test;

(5) That the gas mass equation used in calculating the leak rate was inaccurate.

Petitioners' Br. at 4.

[3] A final order of the NRR Director filed with the NRC becomes final agency action if the NRC does not act to reverse or modify the Director's decision within 25 days. 10 C.F.R. § 2.206(c)(1) (1988). Although the NRC's regulations provide that the NRC's review is discretionary, *see id.*, the Sixth Circuit has suggested that "[i]t is apparently the practice of the Commission to review each denial of a § 2.206 petition to assure that the director has not abused his discretion." *Dickinson v. Zech*, 846 F.2d 369, 371 (6th Cir. 1988).

their petition for review with this court on May 8, 1987.[4] Thereafter, CECo filed a brief as an intervening respondent.

Subsequent to the filing of the petitioners' petition for review, the respondents filed a motion to dismiss the petition for want of jurisdiction. On October 15, 1987, this court issued an order which stated that "respondents' motion to dismiss will be considered with the merits of this appeal by the panel assigned to consider this case." *Citizens of Illinois v. NRC*, No. 87-1732, order at 2 (7th Cir. Oct. 15, 1987).

B. *Facts*

The petitioners challenge certain tests conducted by CECo, and approved by the NRC, on the containments of three nuclear power reactors owned and operated by CECo. The containment at a nuclear power plant basically is a large shielding structure that surrounds the nuclear reactor. This shield is designed to contain radioactive material in the

[4] The petition for review was prepared and signed by Dr. Zinovy V. Reytblatt. Dr. Reytblatt also prepared the original brief on behalf of the petitioners. In an order docketed June 19, 1987, this court stated that "[a]s far as we know, Reytblatt is not an attorney; accordingly, he may not represent anyone other than himself. The brief, therefore, is ordered stricken." The order did not address, however, the petition for review also signed by Dr. Reytblatt. In a similar context, in an opinion authored by then-Judge Stevens, we held that "[e]ven if [a] notice was defective because not signed by a member of the local Bar, such a defect *was surely not jurisdictional*. . . . No motion to dismiss the first appeal having been made in this court, we need not consider the significance of the failure to have the notice executed by a member of the local Bar." *Tryforos v. Icarian Dev. Co.*, 518 F.2d 1258, 1264 (7th Cir. 1975) (emphasis supplied), *cert. denied*, 423 U.S. 1091 (1976); *cf. Lewis v. Lenc-Smith Mfg. Co.*, 784 F.2d 829, 830-31 (7th Cir. 1986) (per curiam) (permitting *pro se* appellant to sign notice of appeal and litigate her claim even when opposing party made timely objection to lay advocate filing both notice of appeal and brief).

event of a nuclear accident. An effective containment therefore ensures that any exposure of the public to radioactive gases will be minimal. To test the effectiveness of a containment, nuclear power plant licensees conduct leak-rate tests. Leak-rate tests are designed to measure how much air might escape under a worst case scenario during a "loss-of-coolant accident."[5] Apparently, no two nuclear reactors have the same leak rate due to various factors such as the containment size, and the configuration, location, meteorological and demographic characteristics of the nuclear plant site. *See* Respondent's Br. at 7.

---

[5] Appendix J of Part 50 to Title 10 of the Code of Federal Regulations contains regulations pertaining to how and when the leak-rate tests should be conducted. As the introduction to Appendix J states:

> One of the conditions of all operating licenses for water-cooled power reactors as specified in section 50.54(o) is that primary reactor containments shall meet the containment leakage test requirements set forth in this appendix. These test requirements provide for preoperational and periodic verification by tests of the leak-tight integrity of the primary reactor containment, and systems and components which penetrate containment of water-cooled power reactors, and establish the acceptance criteria for such tests.

10 C.F.R. Part 50, App. J (1988).

Appendix J further provides that leak-rate tests are to be carried out pursuant to industry standards. The standards followed by CECo were promulgated by the American National Standards Institute (ANSI) in 1981. ANSI/ANS 56.8-1981. The results of the leak-rate tests conducted pursuant to the ANSI standards are expressed as a percentage of the air mass in the containment volume for a twenty-four hour period. The NRC regulations set forth two purposes for such testing: first, it ensures that the licensee can protect the public health and safety in the event of an accident; and second, it indicates structural weak points where gases could escape the containment shield in the event of a loss-of-coolant accident. *See generally* 10 C.F.R. Part 50, App. J (1988); Respondent's Br. at 7.

II

Opinion of the NRR Director

In addressing the merits of the instant case, the Director of the NRR first characterized the contentions of the petitioners as falling into three categories: "(1) allegations regarding the general methodology associated with CILRTs [containment integrated leak-rate tests], (2) allegations concerning the validity of certain CILRTs performed at the Zion Nuclear Power Station Unit 1, in 1982 and 1984, and (3) allegations related to certain computer programs employed by CECO in conducting CILRTs for the Zion, LaSalle, and Byron units." *In Re: Commonwealth Edison Co.*, 25 N.R.C. 121, 122 (1987). The Director then dismissed the allegations contained in the first two categories by noting that he had addressed the same or similar concerns in previous petitions brought pursuant to 10 C.F.R. § 2.206. He concluded that the concerns raised in the instant petition already had received sufficient consideration from the NRC and therefore he refrained from discussing them further.

The Director then addressed the third category of allegations in the petition—deficiencies in the computer programs used during the CILRTs at the CECo plants. First, the petition alleged that the program options "EDIT DATA" and "DELETE DATA FILED" were included in the test programs "for the express purpose of malicious falsification of the test record." *Id.* at 125. The Director determined, however, that "the subject options are a necessary part of the program; they literally permit the compilation of bona fide test data." *Id.* The Director then addressed the second challenge. The petition alleged that the computer program options called "ERASE" or "WIPE" can remove and switch data from CILRTs without leaving a trace that data were deleted or replaced. In dismissing this challenge, the Director concluded:

> Such an option has legitimate uses. The option may be used to purge erroneous data from storage, i.e., sensor data that may have become garbled in trans-

> mission to storage memory. The option may also be used to clear the storage memory prior to the start of an actual test, and to facilitate the performance of parameter studies using archived data. The petition is incorrect in stating that the program leaves no record that data were deleted. The fact that data have been deleted can be readily ascertained by examining the time intervals between data sets. The time at which a data set is obtained is not altered by the "WIPE" option. Therefore, since data are acquired at prescribed, uniform intervals, missing data sets are easily detected.

Id.

The Director then addressed and summarily dismissed further challenges that the use of these options would result in an illegal amount of data rejection, that the computer programs could be manipulated to reinstate previously discarded data, and that these computer programs impermissibly affected the weighting coefficients used to calculate the containment air mass and average temperature.[6]

---

[6] The Director succinctly summarized his decision:

> The Reytblatt affidavit makes numerous assertions of impropriety which appear to evolve from an imprecise understanding of the functions of certain options typically provided for data control in leak test computer codes, a misinterpretation on [sic] the information appearing on printouts of data sets and a misunderstanding of regulatory requirements in industry guidelines. In any event, while the Staff does not review and approve computer codes used in the industry for the leak rate testing of containment structures, as noted above, NRC inspectors carefully scrutinize all aspects of such testing and obtain raw test data for analysis to independently assess the acceptability of leak rate test results. This has been done for each of the facilities identified by the Petitioners. NRC inspectors have observed CILRTs conducted by CECO and analyzed test data, and have found no evidence of wrongdoing on the part of CECO. The Staff concludes, therefore, that the Petitioners' claims have no technical or safety merit.

25 N.R.C. at 127.

III

Discussion

Although the District of Columbia Circuit has addressed the merits of a petition for review in this context without first resolving the jurisdictional question, *see Lorion v. United States Nuclear Regulatory Comm'n*, 785 F.2d 1038 (D.C. Cir. 1986),[7] we believe that our colleagues in the First Circuit were correct in *Massachusetts Public Interest Group, Inc. v. United States Nuclear Regulatory Commission*, 852 F.2d 9, 15 (1st Cir. 1988) when they determined that the threshold issue of jurisdiction ought to be resolved before any discussion of the merits.

1. Contentions of the Parties

The NRC contends that, under the Supreme Court's decision in *Heckler v. Chaney*, 470 U.S. 821 (1985), its action denying the relief requested by the petitioners is not subject to judicial review. In *Chaney*, the Supreme Court held that, under the Food, Drug and Cosmetics Act (FDCA), the Food and Drug Administration's (FDA) decision not to investigate a petition by death-row inmates challenging the safety of certain drugs used for human execution was not subject to judicial review. The Court based its holding primarily on the ground that courts would have no law to apply under the FDCA in reviewing the determination of the FDA. Here, the NRC specifically argues that the presumption against judicial review of agency nonenforcement decisions, which the Supreme Court set forth in *Chaney*, applies to the NRC's decision not to

[7] In *Dickinson v. Zech*, 846 F.2d 369, 372-73 (6th Cir. 1988), the Sixth Circuit explicitly declined to reach the jurisdictional question we address here because the Director had not reached a final decision with respect to the petitioner. The court held that the denial of emergency relief did not constitute final action reviewable by the court of appeals. Nevertheless, the court opined that, if it had jurisdiction over the emergency order, it would have sustained the action of the Director.

undertake the enforcement proceedings requested by the petition.[8] In the NRC's view, the Atomic Energy Act confers broad and largely undefined discretion on the NRC to effectuate the congressional intent underlying the Act:

> None of [the Act's] general provisions, all of which are framed in the permissive, provides any guidance on how the agency is to exercise its enforcement discretion, much less requires the exercise of Commission enforcement authority in a particular case. Clearly, under the rationale of *Heckler*, these Atomic Energy Act provisions do not evidence a Congressional intent to rebut the presumption of nonreviewability that accompanies agency refusal to take enforcement action.

Respondents' Motion to Dismiss at 13.

The petitioners contend that *Chaney* is distinguishable factually because, unlike the FDA, the NRC already had committed its resources to investigate the allegations in the petition. In addition, they submit that the Atomic Energy Act, unlike the FDCA, provides sufficient law for a court of appeals to apply in reviewing a NRC nonenforcement decision:

> In the Atomic Energy Act Congress clearly put a premium upon safety and mandated that nuclear power generation be undertaken with full regard for the health and safety of the public. The NRC has translated this concern into practical rules, which, among other things, mandate that there must be effective containment systems. There is, therefore, no problem in this case in determining what law should apply.

Petitioners' Br. at 17.

---

[8] The intervening respondent, CECo, "takes no position on the question whether the Court has jurisdiction to entertain the Petition for Review." CECo's Br. at 8.

2. Analysis

a.

Our jurisdiction to review decisions of the NRC is found in 28 U.S.C. § 2342(4), a provision of the Administrative Orders Review Act, referred to commonly as the Hobbs Act. The Supreme Court explained this provision in *Florida Power & Light Co. v. Lorion*, 470 U.S. 729 (1985):

> Under 28 U.S.C. § 2342(4), . . . the courts of appeals have exclusive jurisdiction over petitions seeking review of "all final orders of the Atomic Energy Commission [now the Nuclear Regulatory Commission] made reviewable by section 2239 of title 42." Title 42 U.S.C. § 2239(b) provides that the Hobbs Act covers review of "[a]ny final order entered in any proceeding of the kind specified in subsection (a) [of section 2239]." Subsection (a) proceedings are those "for the granting, suspending, revoking, or amending of any license." 42 U.S.C. § 2239(a)(1).

Id. at 733. In *Lorion*, the Supreme Court addressed the issue of whether this statutory framework confers exclusive subject matter jurisdiction on courts of appeals to review decisions of the NRC denying petitions made pursuant to 10 C.F.R. § 2.206.[9] The Supreme Court deter-

---

[9] Section 2.206 of Title 10 of the Code of Federal Regulations provides in relevant part:

> (a) Any person may file a request to institute a proceeding pursuant to section 2.202 to modify, suspend, or revoke a license, or for such other action as may be proper. . . .
>
> (b) Within a reasonable time after a request pursuant to paragraph (a) of this section has been received, the Director of the NRC office with responsibility for the subject matter of the request shall either institute the requested proceeding in accordance with this subpart or shall advise the person who made the request in writing that no proceeding will be instituted in whole or in part, with respect to his request, and the reasons for the decision.

10 C.F.R. § 2.206 (1988).

mined that the provision did so. However, the Court did not address squarely the issue before us here:[10]

> [N]o party has argued that under the [Administrative Procedure Act], 5 U.S.C. § 701(a)(2), Commission denials of section 2.206 petitions are instances of presumptively unreviewable "agency action . . . committed to agency discretion by law" because they involve the exercise of enforcement discretion. *See Heckler v. Chaney*, [470 U.S. 821] at 828-835 [1985]. Because the question has been neither briefed nor argued and is unnecessary to the decision of the issue presented in this case, we express no opinion as to its proper

---

[10] Prior to the Supreme Court's decision in *Lorion*, this court reviewed decisions of the NRC denying enforcement of § 2.206 petitions. *See City of West Chicago v. NRC*, 701 F.2d 632, 653 (7th Cir. 1983); *Rockford League of Women Voters v. NRC*, 679 F.2d 1218, 1219-21 (7th Cir. 1982). However, in these cases, as in *Lorion*, the only jurisdictional issue presented for adjudication was whether the court of appeals (rather than the district court) had initial subject matter jurisdiction. The issue of whether review was permissible at all in light of § 701(a)(2) of the Administrative Procedure Act was not addressed. In *Rockford*, however, this court did point to the difficulty inherent in accomplishing the task of judicial review without ascertainable standards. *See* 679 F.2d at 1222 (where the Commission has violated no statute, regulation, or other rule, the court must review "pure agency inaction—that is, agency refusal to exercise a power which is not also a duty"). *See also Illinois v. NRC*, 591 F.2d 12, 14-16 (7th Cir. 1979) (opinion does not mention jurisdiction, but notes "broad discretion" bestowed by Congress on the NRC).

In addition, a court's pre-*Chaney* decision to review an agency's nonenforcement decision need not control that court's post-*Chaney* jurisdictional analysis of the same sort of agency decision. *See Falkowski v. EEOC*, 764 F.2d 907, 910-11 (D.C. Cir. 1985). In a pre-*Chaney* decision, the District of Columbia Circuit rejected the government's contention that a Department of Justice decision was unreviewable. However, upon remand from the Supreme Court for reconsideration in light of *Chaney*, the court found the same Department of Justice decision unreviewable due to the "absence of any congressional pronouncements cabining the agency's discretion." *Falkowski*, 764 F.2d at 911.

resolution. The issue is open to the Court of Appeals on remand should the Commission choose to press it.

Id. at 735 n.8.[11] We now address and resolve this question.

b.

Under the Administrative Procedure Act (APA), 5 U.S.C. §§ 551-706, final actions of governmental agencies generally are presumed to be reviewable by the courts. *See Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 410 (1971); *Abbott Labs. v. Gardner*, 387 U.S. 136, 140-41 (1967); *see also* 5 U.S.C. §§ 702 & 704. However, section 701(a)(2) precludes judicial review when "agency action is committed to agency discretion by law." 5 U.S.C. § 701(a)(2).[12] The Supreme Court directly addressed this exception to the general rule of judicial reviewability in *Overton Park*. The Court noted that the provision "is a very narrow exception," and "that it is applicable in those rare instances where 'statutes are drawn in such broad terms that in a given case there is no law to apply.' " *Overton Park*, 401 U.S. at 410 (quoting S. Rep. No. 752, 79th Cong., 1st Sess., 26 (1945)).

Subsequently, in *Heckler v. Chaney*, 470 U.S. 821 (1985), the Supreme Court further explicated the scope of section 701(a)(2). In that case, several death-row inmates in

---

[11] On remand, the District of Columbia Circuit avoided resolution of the issue and proceeded to address, and dismiss, the merits presented by the petitioners. *Lorion v. NRC*, 785 F.2d 1038, 1041 (D.C. Cir. 1986).

[12] Section 701(a) reads:

> (a) This chapter applies, according to the provisions thereof, except to the extent that—
>
> (1) statutes preclude judicial review; or
>
> (2) agency action is committed to agency discretion by law.

The NRC has not argued that § 701(a)(1) is applicable in this case.

Texas and Oklahoma brought suit for review of a denial by the FDA to exercise its enforcement power to ensure that states only use drugs that are "safe and effective" for human execution. The FDA had approved the challenged drugs for certain uses, but not for executions. The inmates were concerned that the drugs might cause "torturous pain," rather than "produc[ing] death quickly and without pain." *Chaney v. Heckler*, 718 F.2d 1174, 1177 (D.C. Cir. 1983), *rev'd*, 470 U.S. 821 (1985). In refusing to investigate the petition, the FDA asserted that (1) it did not have jurisdiction to regulate state-sanctioned executions involving lethal injections, and (2) it had inherent agency discretion to refrain from undertaking such an activity.

The Supreme Court held that the court of appeals did not have jurisdiction. Although it noted that the APA provides a presumption of reviewability of agency actions, the Court reasoned that, "before any review at all may be had, a party must clear the hurdle of § 701(a). That section provides that the chapter on judicial review 'applies, according to the provisions thereof, except to the extent that—(1) statutes preclude judicial review; or (2) agency action is committed to agency discretion by law.' " *Chaney*, 470 U.S. at 828. In interpreting section 701(a)(2), the Court reasoned:

> [R]eview is not to be had if the statute is drawn so that a court would have no meaningful standard against which to judge the agency's exercise of discretion. In such a case, the statute ('law'), can be taken to have 'committed' the decisionmaking to the agency's judgment absolutely. This construction avoids conflict with the 'abuse of discretion' standard of review in § 706—if no judicially manageable standards are available for judging how and when an agency should exercise its discretion, then it is impossible to evaluate agency action for 'abuse of discretion.'

Id. at 830.

Consequently, the Court held that a *refusal* to take *enforcement* action by an administrative agency is presumptively unreviewable by the courts. *Id.* at 831. The Supreme Court gave several reasons in support of its interpretation of section 701(a)(2): (1) an administrative agency is in the best position to assess its resources and technical expertise in claims brought under the statutes and regulations that it is charged to administer; (2) an agency determination not to enforce its authority, as opposed to exercising its authority, generally does not infringe upon an individual's property right or liberty interest; and (3) the situation is analogous to the unreviewable decision of a prosecutor concerning whether or not to indict an individual.

Despite the presumption of unreviewability, however, the Court noted that "the presumption may be rebutted where the substantive statute has provided guidelines for the agency to follow in exercising its enforcement powers." *Id.* at 832-33. As an example of a situation where the presumption adequately was rebutted by a petitioner, the *Chaney* Court noted the earlier decision in *Dunlop v. Bachowski*, 421 U.S. 560 (1975) (dispute under Labor-Management Reporting and Disclosure Act (LMRDA), 29 U.S.C. § 481 *et seq.*, requesting Secretary of Labor to investigate and file suit to set aside union election). In summarizing the *Dunlop* decision, the *Chaney* Court noted that "the Court of Appeals . . . had found the 'principle of absolute prosecutorial discretion' inapplicable, because the language of the LMRDA indicated that the Secretary was required to file suit if certain 'clearly defined' factors were present. The decision, therefore, was not 'beyond the judicial capacity to supervise.' "[13] In contrast

---

[13] *Chaney*, 470 U.S. at 834. The court of appeals decision cited by the *Chaney* Court set forth these "clearly defined factors" as follows:

> [Section] 482(b) of the L-MRDA provides that after investigating a complaint, [the Secretary] must determine whether there is probable cause to believe that violations of § 481 have oc-

(Footnote continued on following page)

to the LMRDA, the *Chaney* Court noted that the FDCA's general provision for enforcement, 21 U.S.C. § 372,

> provides only that "[t]he Secretary is *authorized* to conduct examinations and investigations . . ." (emphasis added). Unlike the statute at issue in *Dunlop*, § 332 gives no indication of when an injunction should be sought, and § 334, providing for seizures, is framed in the permissive—the offending food, drug, or cosmetic "shall be liable to be proceeded against." . . . The Act's enforcement provisions thus commit complete discretion to the Secretary to decide how and when they should be exercised.

Chaney, 470 U.S. at 835.

Most recently, the Supreme Court has held that section 701(a)(2) precludes judicial review of personnel termination decisions by the Director of the Central Intelligence Agency because the relevant provision of the National Security Act, 50 U.S.C. § 403(c), "strongly suggests that its implementation was 'committed to agency discretion by law.' " *Webster v. Doe*, 108 S. Ct. 2047, 2052 (1988) (quoting 5 U.S.C. § 701(a)(2)). In defining what is meant by the statutory language "committed to agency discretion by law," the Court noted that "even when Congress has not affirmatively precluded judicial oversight, 'review is not to be had if the statute is drawn so that a court would have

---

[13] *continued*

curred affecting the outcome of the election. Where a complaint is meritorious and no settlement has been reached which would remedy the violations found to exist, the language and purpose of § 402(b) indicate that Congress intended the Secretary to file suit. Thus, apart from the possibility of settlement, the Secretary's decision whether to bring suit depends on a rather straightforward factual determination, and we see nothing in the nature of that task that places the Secretary's decision "beyond the judicial capacity to supervise."

Bachowski v. Brennan, 502 F.2d 79, 88 (3d Cir. 1974) (quoting K. Davis, Administrative Law Treatise § 28.16 at 984 (1970 Supp.)) (footnotes omitted), *rev'd*, 421 U.S. 560 (1975).

no meaningful standard against which to judge the agency's exercise of discretion.' " *Id.* (quoting *Chaney*, 470 U.S. at 830).

c.

Only one court has addressed squarely[14] the applicability of section 701(a)(2) in the context of a nonenforcement

[14] Nevertheless, two courts of appeals, in dictum, have expressed conflicting impressions concerning the issue of whether there is law to apply under the Atomic Energy Act in the context of an NRC decision not to issue an order to show cause under § 2.206. *Compare Dickinson v. Zech*, 846 F.2d 369, 372 (6th Cir. 1988) ("We do note, however, that the fact that the Commission reviews its director's denial of petitions for an abuse of discretion may indicate that there are indeed standards against which a final decision denying the petition may be reviewed by a court. Thus, there may well be 'law to apply.' ") *with Lorion v. NRC*, 785 F.2d 1038, 1040 (D.C. Cir. 1986) ("we doubt that on the facts before us the NRC's discretion is restricted by the Atomic Energy Act"). In neither case, however, did the court resolve the issue.

We are aware that other courts, including our own, have reviewed final orders of the NRC after the Supreme Court issued its opinion in *Chaney*. However, none of those courts addressed the question of appellate jurisdiction over a final order of the NRC in the context of an NRC nonenforcement decision. *See, e.g., Commonwealth Edison Co. v. NRC*, 830 F.2d 610 (7th Cir. 1987); *Sierra Club v. NRC*, 825 F.2d 1356, 1359-60 (9th Cir. 1987); *Eddleman v. NRC*, 825 F.2d 46, 48-49 (4th Cir. 1987); *Ohio v. NRC*, 814 F.2d 258 (6th Cir.), *cert. denied*, 107 S. Ct. 1893 (1987).

Finally, we note that courts of appeals, including our own, in addressing post-*Chaney* agency nonenforcement decisions under other statutes, have not hesitated to find those decisions unreviewable because Congress provided no law to apply. *See, e.g., Andrews v. Consolidated Rail Corp*, 831 F.2d 678 (7th Cir. 1987) (holding nonenforcement decision of Department of Labor unreviewable under Rehabilitation Act); *Bethlehem Steel Corp. v. EPA*, 782 F.2d 645, 654-57 (7th Cir. 1986) (holding EPA refusal to conduct a rulemaking proceeding unreviewable under Clean Air Act); *Schering Corp. v. Heckler*, 779 F.2d 683, 685-87 (D.C. Cir. 1985) (holding nonenforcement decision of FDA unreviewable under FDCA); *Rail-*

(Footnote continued on following page)

decision by the NRC. *See Massachusetts Public Interest Research Group, Inc. v. NRC*, 852 F.2d 9 (1st Cir. 1988) [hereinafter *MassPIRG*]. In *MassPIRG*, individuals petitioned the NRC for an order to show cause why a New England nuclear power plant should not remain closed or have its license suspended because of various concerns relating to the health and safety of the public. The NRC denied the petition and took no enforcement action against the nuclear facility. Before the First Circuit, the NRC argued that the court had no jurisdiction to review the nonenforcement decision because there was insufficient law to apply. The court agreed. After a thorough review of the Atomic Energy Act and the regulations and policy statements of the NRC, the First Circuit held that "given the lack of a meaningful standard of review in either the Atomic Energy Act of 1954 . . . or the NRC regulations, the refusal of the NRC to issue a show cause order against [Boston] Edison is not subject to judicial review." *Id.* at 10.[15]

In addressing the same question presented to the First Circuit, we note that, under the analytical framework provided by the Supreme Court, our task must commence with a "careful examination of the statute on which the claim of agency illegality is based . . . ." *Webster*, 108

---

[14] *continued*
way Labor Executives Ass'n v. Dole, 760 F.2d 1021, 1024-25 (9th Cir. 1985) (holding nonenforcement decision of Secretary of Transportation unreviewable under various railroad safety acts); *Gillis v. United States Dept. of Health and Human Servs.*, 759 F.2d 565, 575-78 (6th Cir. 1985) (holding nonenforcement decision of Secretary of Health and Human Services unreviewable under Hill-Burton Act).

[15] Although the *MassPIRG* court explained that "[n]one of the parties have argued that the controlling statute, the Atomic Energy Act, provides a standard within the meaning of *Chaney*," 852 F.2d at 15, the court nevertheless addressed the issue, noting that "the general enforcement provisions of the Act are all framed in permissive language. They provide no guidance as to how the agency should exercise its discretion." *Id.*

S. Ct. at 2052; *see Chaney*, 470 U.S. at 834; *see also Overton Park*, 401 U.S. at 411. Here, that statute is the Atomic Energy Act. After reviewing the Act, the First Circuit concluded that Congress "provid[ed] no guidance as to how the agency should exercise its discretion." *Mass-PIRG*, 852 F.2d at 15. We agree. The Atomic Energy Act aligns closely with the FDCA, which the Supreme Court determined in *Chaney* provides courts with "no law to apply."[16] Indeed, its entire scheme vests very wide discretion in the agency. *See Public Serv. Co. v. NRC*, 582 F.2d 77, 82 (1st Cir.), *cert. denied*, 439 U.S. 1046 (1978). For instance, the general enforcement provisions of the Atomic Energy Act, like the general enforcement provision of the FDCA, 21 U.S.C. § 372, "*authorize[s]*" the NRC to "make such studies and investigations . . . as the *Commission may deem necessary or proper* to assist it in [the]

---

[16] We note that the Atomic Energy Act is quite dissimilar from the LMRDA, which the Supreme Court determined in *Dunlop* provides sufficient law for courts to apply. The relevant section of the LMRDA states:

> The Secretary shall investigate such complaint and, if he finds probable cause to believe that a violation of this subchapter has occurred and has not been remedied, he shall, within sixty days after the filing of such complaint, bring a civil action against the labor organization as an entity in the district court of the United States in which such labor organization maintains its principal office to set aside the invalid election, if any, and to direct the conduct of an election or hearing and vote upon the removal of officers under the supervision of the Secretary and in accordance with the provisions of this subchapter and such rules and regulations as the Secretary may prescribe. . . .

29 U.S.C. § 482(b). Accordingly, while the statute arguably gives some discretion to the Secretary of Labor (unlike the Atomic Energy Act, the FDCA, and the National Security Act), the LMRDA contains some clearly defined factors that a court of appeals can apply upon review. *See supra* note 11. As the Supreme Court explicitly has noted, the LMRDA "quite clearly withdr[aws] discretion from the agency and provide[s] guidelines for exercise of its enforcement power." *Heckler v. Chaney*, 470 U.S. 821, 834 (1985).

. . . enforcement of this chapter . . . ." 42 U.S.C. § 2201(c) (emphasis supplied); *cf.* 21 U.S.C. § 372 (under the FDCA, "[t]he Secretary is *authorized* to conduct examinations and investigations") (emphasis supplied). In addition, the NRC is "authorized" to "prescribe such regulations or orders as it *may deem necessary* . . . to govern any activity authorized pursuant to this chapter . . . in order to protect health and to minimize danger to life or property . . . ." 42 U.S.C. § 2201(i) (emphasis supplied). Congress also has "authorized" the NRC to "make, promulgate, issue, rescind, and amend such rules and regulations as *may be necessary* to carry out the purposes of this chapter." 42 U.S.C. § 2201(p) (emphasis supplied). Likewise, the wording of the section relating to the revocation of licenses, like the provision in the FDCA providing for seizure of offending substances, 21 U.S.C. § 334, is permissive: "Any license *may* be revoked for any material false statement in the application or any statement of fact required under section 2232 of this title, or because of conditions . . . which would warrant the Commission to refuse to grant a license on an original application . . . ." 42 U.S.C. § 2236(a); *see Rockford League of Women Voters v. NRC*, 679 F.2d 1218, 1222 (7th Cir. 1982) (section 2236(a) "permits but does not direct the NRC to revoke a license or permit . . . ."); *cf.* 21 U.S.C. § 334 (under the FDCA, "[a]ny article of food, drug, device, or cosmetic that is adulterated or misbranded . . . *shall be liable* to be proceeded against").

Finally, the section providing for injunction proceedings under the Atomic Energy Act, much like the injunction provision of the FDCA, 21 U.S.C. § 332, confers broad discretion upon the NRC. *See* 42 U.S.C. § 2280 ("[w]henever in the *judgment of the Commission* any person" has or will violate the Act, the Attorney General "may" apply for an injunction); *cf.* 21 U.S.C. § 332 (pro-

viding the FDA with no guidance as to when it should seek an injunction).[17]

Upon review of "the overall structure of the [Atomic Energy] Act," *Webster*, 108 S. Ct. at 2052, we believe it is apparent that Congress has entrusted the NRC with wide, unreviewable discretion in the area of agency enforcement. *See MassPIRG*, 852 F.2d at 15; *cf. Webster*, 108 S. Ct. at 2052-53 (Congress did not intend for courts to review personnel termination decisions by the CIA); *Chaney*, 470 U.S. at 837-38 (Congress did not intend for courts to review nonenforcement decisions of the FDA).[18] Accordingly, the presumption against reviewability of agency nonenforcement decisions is not rebutted here. *See Chaney*, 470 U.S. at 832-33. Indeed, as the First Circuit aptly summarized, " '[t]he Atomic Energy Act of 1954 is hallmarked by the amount of discretion granted the Commission in working to achieve the statute's ends. The Act's regulatory scheme "is virtually unique in the degree to which broad responsibility is reposed in the administering agency, free of close prescription in its charter as to how it shall proceed in achieving the statutory objective." ' " *MassPIRG*, 852 F.2d at 15 (quoting *Public Serv. Co.*, 582 F.2d at 82 (quoting *Siegel v. AEC*, 400 F.2d 778, 783 (D.C. Cir. 1968))); *accord Illinois v. NRC*, 591 F.2d 12, 16 (7th Cir. 1979).

d.

As pointed out by the District of Columbia Circuit in *Lorion v. United States Nuclear Regulatory Commission*,

---

[17] Similarly, the National Security Act provision that was at issue in *Webster* provides in relevant part, "the Director of Central Intelligence *may, in his discretion*, terminate the employment of any officer or employee of the Agency whenever he shall deem such termination necessary or advisable in the interests of the United States . . . ." 50 U.S.C. § 403(c) (emphasis supplied).

[18] *See also Lorion*, 470 U.S. at 750-52 (Stevens, J., dissenting) (Congress did not intend for courts to review nonenforcement decisions of the NRC).

785 F.2d 1038 (D.C. Cir. 1986), "*Chaney* did not decide . . . whether *non*-statutory standards could similarly restrict agency discretion; the court '[left] to one side the problem of whether an agency's *rules* might under certain circumstances provide courts with adequate guidelines for informed judicial review of decisions not to enforce.' " *Id.* at 1040 (quoting *Chaney*, 470 U.S. at 836) (emphasis in original). Despite this open-ended language, both the District of Columbia Circuit and the First Circuit subsequently have held that agency regulations can "provide a sufficient standard for meaningful review." *MassPIRG*, 852 F.2d at 16; *see Center for Auto Safety v. Dole*, 846 F.2d 1532, 1534 (D.C. Cir. 1988) (per curiam); *see also Padula v. Webster*, 822 F.2d 97, 100 (D.C. Cir. 1987). We agree with the position articulated by these courts. *See generally Service v. Dulles*, 354 U.S. 363, 388 (1957) ("While it is of course true that under [the applicable statute] the Secretary was not obliged to impose upon himself these more rigorous substantive and procedural standards, . . . having done so he could not, so long as the Regulations remained unchanged, proceed without regard to them."). Consequently, we must determine whether the regulations promulgated by the NRC provide us with an appropriate standard for judicial review.

In addressing this issue in the context of the regulations promulgated by the National Highway Transportation Safety Administration (NHTSA), the District of Columbia Circuit found no law to apply under the agency's applicable regulation—49 C.F.R. § 552.8. *See Center for Auto Safety*, 846 F.2d at 1534. Section 552.8 of Title 49 of the Code of Federal Regulations provides for enforcement of a petition if the NHTSA determines that there "is a reasonable possibility that the order requested . . . will be issued at the conclusion of the appropriate proceeding." 49 C.F.R. § 552.8 (1987). In finding this language insufficient to establish judicial review, the court reasoned:

> The regulation *sub judice* provides the court no way to second-guess the weight or priority to be assigned these elements. In particular, it would be unwise, and

> inconsistent with the broad mandate of the agency under the governing statute, to infer a mandatory allocation of the agency's limited resources from the regulation at issue.

Center for Auto Safety, 846 F.2d at 1535.

Our review of the applicable NRC regulations convinces us that, like the NHTSA regulation, no standard of review is defined. Neither section 2.202, which provides for orders to show cause, nor section 2.206, which provides for requests for action, give us any meaningful "law to apply." *See* 10 C.F.R. § 2.202 (the "Director of Nuclear Reactor Regulation . . . *may institute a proceeding* to modify, suspend, or revoke a license or for such other action as *may be proper* by serving on the licensee an order to show cause . . . .") (emphasis supplied); 10 C.F.R. § 2.206(b) ("Within a reasonable time after a request [for a section 2.202 proceeding] . . . has been received, the Director of the NRC office with responsibility for the subject matter of the request shall either institute the requested proceeding in accordance with this subpart or shall advise the person who made the request in writing that no proceeding will be instituted in whole or in part, with respect to his request, and the reasons for the decision."). The regulations clearly commit total discretion to the NRC on matters of enforcement. *See MassPIRG*, 852 F.2d at 16 ("The NRC regulations concerning section 2.206 petitions are entirely permissive."); *Rockford League of Women Voters*, 679 F.2d at 1222 ("[T]he implementing regulations [of the Atomic Energy Act] are likewise permissive rather than mandatory. The only thing the Director is required to do is, if he decides not to institute a revocation proceeding, to notify the requesting party in writing of his decision and of the reasons for it . . . .").

The petitioners contend, however, that other regulations, relating to the testing of containments and the revocation of licenses, provide sufficient law for us to apply. *See, e.g.*, 10 C.F.R. Part 50, App. A (1988); 10 C.F.R. Part 50, App. J (1988). The NRC has failed to respond to the

petitioners' citations to these specific regulations. Nevertheless, after a thorough review of these regulations, we do not find that they provide us with the requisite law to apply. The regulations primarily set forth technical factors concerning the design of nuclear reactor containments and the test requirements for "preoperational and periodic verification . . . of the leak-tight integrity of the primary reactor containment." 10 C.F.R. Part 50, App. J (1988). These regulations therefore merely set forth the methodology of containment construction and leak-rate testing; they provide no guidelines for the agency to follow in exercising its enforcement powers that we, as a reviewing court, could look to in adjudicating the NRC's decision not to take enforcement action.[19] As the Supreme Court succinctly explained in *Chaney*, "an agency decision not to enforce often involves a complicated balancing of a number of factors which are peculiarly within its expertise." 470 U.S. at 831. Nothing in the regulations cited

[19] *See Chaney*, 470 U.S. at 832-33 (presumption of unreviewability rebutted "where substantive statute has provided guidelines for the agency to follow in exercising its enforcement powers"); *see also Webster*, 108 S. Ct. 2052 (statutory language "strongly suggests that its implementation was 'committed to agency discretion by law' " and, thus, unreviewable where Court could see "no basis on which a reviewing court could properly assess an Agency termination decision").

The petitioners also contend that 10 C.F.R. § 50.34(a) (1988), 10 C.F.R. § 50.40(a) (1988), and 10 C.F.R. 50.100 (1988) provide us with a sufficient standard for judicial review. However, § 50.34(a) merely sets forth the required contents of a preliminary safety analysis report. Such a report must be included, and prepared by the *applicant*, in an application for a construction permit. Section 50.40(a) simply provides that in applications for a license, the NRC "will be guided" by the "health and safety of the public." This is essentially the same language contained in the AEA itself. Finally, § 50.100 is an enforcement regulation that, like the statutory enforcement provisions, is worded in the permissive. Accordingly, we do not find that these regulations, either separately or in concert, alter our holding that we have no jurisdiction to review the petition.

IN THE UNITED STATES COURT OF APPEALS FOR SEVENTH CIRCUIT

CITIZENS OF ILLINOIS,

Petitioners,

No. 87-1732

vs.

PETITION FOR REVIEW

NUCLEAR REGULATORY COMMISSION,

Respondent

PETITION FOR REVIEW OF A DECISION OF THE NUCLEAR REGULATORY COMMISSION

BRIEF FOR PETITIONER CITIZENS OF ILLINOIS

Mr. JOHN STAINTHORP, Esq.
People's Law Office
343 S. Dearborn Street
Suite 1607
Chicago, Illinois 60604
312-663-5046

TABLE OF CONTENTS

Page

STATEMENT OF FACTS

A. Overview 1

B. Procedural history 3

C. Facts 9

ARGUMENT

1. This court has jurisdiction to review the denial of the 2.206 Petition by the Nuclear Regulatory Commission 14

2. The Nuclear Regulatory Commission decision that the Zion weighting coefficients did not affect the result of the leak rate tests was arbitrary and capricious 22

3. The decision by the Nuclear Regulatory Commission not to issue an order to show case upon Commonwealth Edison Company to demonstrate acceptability of its computer programs was arbitrary and capricious 27

4. The Nuclear Regulatory Commission decision that the Zion, 1984, test complied with the regulations was arbitrary and capricious 31

CONCLUSION 34

TABLE OF CASES AND AUTHORITIES

Page

Anacoso-Sanchez v. INS,
779 F.2d 1260 (7th Cir. 1985) 63

Cardoza v. Commodity Commission,
768 F.2d 1542 (7th Cir. 1985) 17,20

Cerro Wire and Cable Co. v. FERC,
677 F.2d 124, 128 (D.C. Cir. 1982) 19

County of Rockland v. NRC,
709 F.2d 766 (2nd Cir 1983), 104 S.Ct. 21

Florida Powerand Light Co. v. Lorion,
470 U.S. 729 (1985) ii

Heckler v. Chaney,
470 U.S. 821 (1985) ii,13,15,16,18,19,20.

Heterochemical Co. v. FDA,
644 F.Supp 271 (E.D. N.Y. 1986) 19,20

Illinois v. NRC,
591 F.2d (7th Cir. 1979) 21

Nader v. NRC,
513 F.2d 1045 (D.C.1975) 21

Natural Resources Council v. NRC,
606 F.2d 1261 (D.C. Cir. 1979) 21

North. Indiana Publ. Service Co. v. FERC,
782 F.2d 730 (7th Cir. 1986) 19

Porter County Chapter v. NRC,
600 F.2d 1363 (D.C. Cir. 1979) 21

Robbins v. Reagan, 780 F.2d 37 (D.C. Cir. 1985) 20

Rockford League of Women Voters v. NRC,
679 F.2d 1218 (7th Cir. 1982) 21

Seacost Anti-Pollution League of N.H. v. NRC,
690 F.2d 1025 (D.C. Cir. 1982) 20

Service v. Dulles, 345 U.S. 363 (1957) 20

Sierra Club v. Block,
615 F.Supp 44(D. Col. 1985) 20

5 U.S.C. §701 et seq. 13

10 C.F.R. 2.206 3,5

10 C.F.R. §2.400 et seq 8

10 C.F.R. Part 50, App. J. II.D. 1,2,4,6,9,10,11,12,16

28 U.S.C. §2342(4) 9

42 U.S.C. §2011 et seq. 15

42 U.S.C. §2131 et seq. 8

42 U.S.C. §2232 et seq 8,15

42 U.S.C. §2133 et seq. 8, 9, 15

42 U.S.C. §2236 et seq. 9

JURISDICTIONAL STATEMENT

The Petition was filed with the Nuclear Regulatory Commission (hereinafter NRC) on August 30, 1986. The NRC had jurisdiction to consider the Petition pursuant to 42 U.S.C. §2236 and 10 C.F.R. §2.206. The denial of the Petition became final agency action on March 10, 1987. On May 8, 1987 Petitioner filed with this Court its Petition for Review of the Director's Decision. Jurisdiction of this Court to consider to consider the Petition for Review is pursuant to 5 U.S.C. §701 et seq., 28 U.S.C. §2342(4), and 42 U.S.C. §2239(b). Petitioner requests this Court to reverse the agency's denial of the Petition and remand the matter to the NRC with instructions that it issue an Order to Show Cause upon Commonwealth Edison Company. Respondent does not contest that, if judicial review is available, this Court is the appropriate forum for such review, see *Florida Power and Light Co. v. Lorion*, 470 U.S. 729 (1985), but argues, based upon *Heckler v. Chaney*, 470 U.S. 821 (1985), that the NRC decision is a completely unreviewable refusal to exercise its enforcement authority.

STATEMENT OF FACTS

A. OVERVIEW

This petition for Review challenges the determination of the Nuclear Regulatory Commission (hereinafter NRC) that the primary reactor containments for the nuclear power plants operated by Commonwealth Edison Company (hereinafter CECo) at Zion and LaSalle have been demonstrated safe and effective as required by 10 C.F.R. Part 50 Appendix J.

The reactor containment system of a nuclear power plant is, in the event of a reactor accident, the only barrier between the radioactive contents of the containment building and the environment. Thus, it is the ultimate means to prevent a major disaster which could thousands, hundred of thousands, or millions of deaths, vast environmental destruction, and a worldwide spread of radiation. During the incident at Three Mile Island Plant the containment system worked and prevented any substantial escape of radiation. Though the the incident was severe its worst effects were prevented by an effective containment system. In the incident at Chernobyl, the containment structure did not work and substantial amounts of radiation escaped, quickly killing several workers in the vicinity, spreading radiation throughout Europe and the world, creating vast economic damage, an, it is expected, causing thousands, or hundreds of thousands of deaths for decades to come.

It is possible to operate a nuclear reactor without any containment system. The environment will not be substantially effected as long as the reactor is operating normally and without an accident. However, because of the massive potential for damage to life and property posed by an uncontained accident at a nuclear power plant, it is against the law for any commercial nuclear energy generating plant to be operated in the United States without a containment system which can accomodate the expected pressure and temperature conditions resulting from a reactor accident, and prevent leakage in excess of the design leakage rate *. 10 C.F.R. §50.34, Part 50, App. A, Part 50, App. J.

10 C.F.R. instituted the preoperational and periodic testing of containment systems for their leak rate. In the absece of a reliable testing procedure a leaking containment system will be revealed only during an accident wich will result in the escape of radiation, causing a catastrophic disaster. 10 C.F.R. does not allow operation of a nuclear facility unless the containment system's leak rate has been proven to be below the limits specified in the operating license.

The Petition to the NRC in this case alleged that the testing of the containment structures at the Zion and LaSalle

---

* The containment system leak rate is the amount of the gases that escape from the containment, under certain pressure, into the environment in 24 hours, expressed in per cent to the contents of the ccontainment building. 10 C.F.R. Part 50, App. J. II.D.

nuclear power plants has been defective for a number of years and that there is, therefore, no assurance that these containment systems would function effectively in the event of an accident. The Petitioner requested that the leak rate tests be properly conducted, that the records of these properly conducted tests be made public documents, that the NRC review the computer programs used by CECo in the tests, that the conservative estimates of the actual leak rates * of the plants be determined, and that, if the leak rate estimates were outside the limits specified in the in the operating licenses, the reactors be placed into cold shut down for repair and retesting.

The NRC denied the Petitioner's request. The Petitioner has now petitioned this court for review of that decision on the grounds that it is arbitrary and capricious and an abuse of discretion.

B. PROCEDURAL HISTORY.

In august, 1986 the Petitioner, pursuant to 10 C.F.R. 2.206, submitted to the NRC an "EMERGENCY RELIEF

---

* The "calculated leak rates" are based on the test data, and on certain assumptions. To assure that the real leak rates are within the limits prescribed by the opating licenses, various assumptions are applied, and the worst (the largest) resulting leak rate is called "the conservative estimate." This procedure is common and is referred to as a "parametric study."

PETITION" (Appendix, p.1) alleging that deficient leak rate testing of nuclear containment systems of CECo nuclear power plants had created an apparently unsafe situation. The Petition, which contained a letter from Dr. James Kenevan, Associate Professor, Department of Computer Science, Illinois Institute of Technology, and an affidavit from Dr. Zinovy Volf Reytblatt, Associate Professor, Department of Mathematics, Illinois Institute of Technology, alleged that the testing was deficient because:

1. The Zion tests used the incorrect weighting coefficients, which was confirmed by the failure of the verification test;

2. The computer program used by CECo in the tests allowed impermissible deletion and alteration of data recorded during the test;

3. Data produced during the Zion 1983 test had in fact been substantially altered and there existed a possibility of using these computer programs to diminish the valculated leak rates for meeting the allowable values;

4. The test did not comply with 10 C.F.R. Part 50, App. J in that a test of the Zion containment system in July–August 1984 was followed by a failing verification test and that the NRC thereafter allowed an illegal short duration test;

5. That the gas mass equation used in calculating the leak rate was incorrect *.

---

* This part of Petitioner's claim is now moot. The NRC,

The Petition was filed by the NRC on August 30, 1986, and on October 22, 1986 Harold Denton, Director, Office of Nuclear Reactor Regulation, NRC, acknowledged receipt of the Petition in a notice in the Federal Register *, declined to take emergency action and indicated he would review the Petition and issue a formal ruling within a reasonable time (see 10 C.F.R. 2.206(b)).

Upon receipt of the Petition the NRC forwarded it to CECo. CECo then prepared a response (App. p.44) which attempted to respond to the allegations of the Petition.

---

after claiming for years that the equation was not "wrong," or, in the alternative, that it yielded results which were permissible approximations and not significantly different from those yielded by the "Reytblatt method" (see App p.108), has now proposed amendments to 10 C.F.R. Appendix J which include the correct equation suggested by Dr. Reytblatt.

* In this notice the NRC misinterpreted the Petition, stating "Suspension of the operating licenses for the (Zion, LaSalle and Byron) facilities was requested." (App.p.26). By letter of January 5, 1987 Dr. Reytblatt noted the inaccuracy and requested that the notice be changed to accurately report that the Petition requested "An Order To Show Cause upon Commonwealth Edison Company of Illinois to release records from the tests, and contingent upon the leak rate conservative estimates, suspension of the operating license for the referenced facilities were requested." No change was issued.

On February 10, 1987 Harold Denton issued a "Director's Decision Under 10 C.F.R. §2.206" denying the Petition (DD-87-02, App. p.30). Several prior Director's Decisions were relied upon by the Director in denying relief in DD-87-02.

The Decision asserted that in prior Director's Decision, DD-84-6 (App. p.108), the Director had considered claims (App. p.102, 106), that the methodology used to calculate leakage rate was defective. In DD-84-6 the Director responded to a Petition filed by Edward Gogol which raised claims concerning the general methodology of Integrated Leak Rate Testing, alleging, *inter alia*, possible fudging of the calculated leak rate through discarding the first part of the mass curve, discarding data, insufficient and unjustified placement of temperature and pressure sensors, use of unjustified weighting coefficients, and various other errors. The Petition also alleged that the requirements for archiving of raw test data were loose, that is, the most important data were not made available for public review. In response to the Petition, DD-84-6 claimed that "a properly conducted test would not likely be flawed by the types of deficiences alleged in the Petitions such as unjustified discarding of data or the use of unjustified weighting coefficients." The decision discounted the petition's claim about loose archiving of raw data and declined to order that such data be made available for public inspection. The Director relied on this decision to dispose of similar claims in the instant petition.

DD-87-02 asserted that in prior decisions DD-85-2 [Ap-

pendix,p.98 (decision), p.88 (petition)], and DD-85-10 [App., p.80 (decisions). p.56 (petitions)] the Director had considered the adequacy of leakage rate testing for the Zion containment system in particular, and he adopted those decisions to deny the corresponding portions of the instant Petition.

DD-85-2 responded to petition filed by Mr. Gogol on June 5, 1984. This petition claimed that the 1981 containment test of the Zion facility, which was submitted to the nRC in June, 1981, was scientifically invalid. The petition contained an affidavit from Dr. Reytblatt which, based upon an evaluation and analysis of data from the 1981 test, identified several problems with the verification test,and concluded that the test was deficient. The NRC then performed a special inspection of the 1981 and 1983 Zion tests and discovered faults which led it to conclude that both tests were not in compliance with 10 C.F.R. App. J. Upon notification by the NRC that the problems had been discovered and disclosed by the Petitioner, CECo temporarily shut down the Zion power station for repair and retesting. The Director issued DD-85-2 granting the petition in part, and allowing the petitioners access to raw data of the 1984 test, but denying the Petitioner's request for access to the computer program which was used for leak rate calculations.

DD-85-10 was in response to a petition filed on March 6, 1985 which claimed, *inter alia*, that the lack of rules concerning weight coefficients in leak rate testing "may lead to underestimating abnormally high leak rates to the degree

that such leaks would appear to be within normal limits," and alleged that incorrect weighting coefficients were in fact used in calculating the Zion leak rate. DD-85-10 noted that weighting coefficients were subject of DD-84-6 and repeated that "a properly conducted leak rate test would not contain the types of deficiences alleged by the Petitioner such as the use of unjustified weighting coefficients." The decision also admitted that the initial verification test of the July, 1984 Zion test failed, but claimed that a subsequent verification, in which the utility used a larger imposed leak rate, adequately demonstrated the accuracy of the main test.

DD-87-02 next stated that the CECo computer programs that allow deletion and alteration of data are legitimate and in accordance with accepted engineering practice. The decision concluded that the CECo leak rate tests were valid and in conformity with applicable regulations and denied the relief requested by the Petitioner.

The Director's decision was filed with the Office of the Secretary of the NRC and, upon expiration of the time for Commission review, became final agency action on March 10, 1987.

On May 8, 1987 the Petitioner filed with this court its Petition for Review of the Director's Decision.

C. FACTS

The operation of commercial nuclear power plants in

this country is regulated by statute (42 U.S.C. §2131 et seq.) and regulation (10 C.F.R. §2.400 et seq.). The operator of such a plant must obtain an operating license issued by the NRC (42 U.S.C. §2131, §2132, §2133; 10 C.F.R. §50.10, §50.22). The NRC is authorized to issue licenses "subject to the provisions of subchapter XV of this chapter and subject to such conditions as the Commission may by rule or regulation establish to effectuate the purposes and provisions of this subchapter." 42 U.S.C. §2133. Subchapter XV (42 U.S.C. §§2231-2242) provides, among other things, that applicants for licenses shall state such technical specification as the NRC may by rule or regulation deem necessary in order for it to find that the plant will "'provide adequate protection to the health and safety of the public,'" 42 U.S.C. §2232(a), and authorizes the NRC to establish atomic safety and licensing boards (42 U.S.C. §2241). The statute requires that the NRC "shall issue such licenses... to persons... who are equipped to observe and who agree to observe such safety standards to protect health and minimize danger to life or property as the Commission may by rule establish" (42 U.S.C. §2133(b)) and provides that "in any event, no license may be issued to any person within the United States if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defence and security or to the health and safety of the public." 42 U.S.C. §2133(d). The statute further provides that any license may be revoked for any reason "which would warrant the Commission to refuse to grant a license on an original application, or for ...failure to observe any of

the terms and provisions of this chapter or of any regulation of the Commission." 42 U.S.C. §2236(a).

The regulations promulgated by the NRC provide that in determining whether a license will be issued to an applicant the NRC will be guided by the consideration "that the health and safety of the public will not be endagered" 10 C.F.R. §50.40(c). The regulations establish minimum requirements for the principal design criteria for water-cooled nuclear power power plants including that "the reactor containment structure, including access openings, penetrations, and containment heat removal system shall be designed so that the containment structure and its internal compartments can accomodate, without exceeding the design leakage rate and with sufficient margin, the calculated pressure and temperature conditions resulting from any loss-of-coolant accident." 10 C.F.R. §50.34(a). Part 50. App. A Criterion 50.

The way in which these tests are to be carried out is prescribed in Appendix J to 10 C.F.R., Part 50. [See also 10 C.F.R. 50.54(o).] The appendix first notes that "one of the conditions of all operating licenses for water-cooled power reactors ...is that primary reactor containments shall meet the containment leakage test requirements set forth in this appendix. These test requirements provide for preoperational and periodic verification by tests of the leak-tight integrity of the primary reactor containment..." The appendix defines the primary reactor containment as "the structure or vessel that encloses the components of the reactor coolant

pressure boundary ... and serves as an essentially leak-tight barrier against the uncontrolled release of radioactivity to the environment." (App. J II.A) Tests of the containment are divided into type A - "tests intended to measure the primary reactor containment overall integrated leakage rate" (App. J II.F); Type B - "tests intended to detect local leaks and to measure leakage across each pressure-containing or leakage limiting boundary" for certain listed penetrations (App. J II.G); and Type C - "tests intended to measure containment isolation valve leakage rates."(App. J II.H.). The tests at issue in this Petition are the Type A tests only.

The Appendix provides that all Type A tests shall be conducted in accordance with the provisions of the American National Standard N45.4-1972. Leakage Rate Testing of Containment Structures for Nuclear Reactors, March 16, 1972 (ANSI N45.4-1972) and that the test shall be verified by a supplemental test which shall "be conducted for sufficient duration to establish accurately the change in leakage rate between the Type A and supplemental test." (App. J III.A.3.(a)(b)).

In fact, most of the tests in question were not performed in accordance with the prescribed 1972 standard but rather, on an exemption basis, in accordance with ANSI/ANS 56.8-1981 "Containment System Leakage Testing Requirements." * No regulations endorsing ANSI/ANS 56.8-1981 have ever

---

* Dr. Reytblatt has been a persistent critic of the 1981 standard and has actively opposed its endorsement by the

been put into effect. This standard is now being replaced by an amended version, ANSI/ANS 56.8–1987.

In very simple terms, a Type A test of a containment involves pressurising the containment, using pumps, to a pressure (Pa) which is "the calculated peak containment internal pressure related to the design basis accident and specified in the technical specification or associated bases." (10 C.F.R. Part 50, App. J.II.I.). Then for the duration of the test, one pressure gauge measures the pressure decay and numerous sensors monitor temperatures at various locations inside the containment. The adequacy of instrumentation must be established and certified through the calibration procedure prior to the beginning of the test. The obtained sensor readings, along with certain assumed parameters (so-called "weighting coefficients") are used to obtain the "calculated" leak rate. The veracity of these assumptions is supposed to be verified by the supplemental ("verification") test.

The verification test must immediately follow the main test. It compares a controlled change of the gas mass (effected by releasing or introducing a known mass of gas from or into the containment) with the change of mass calculated from data provided by the instruments, using the same instruments and assumptions as in the main test. A failing verification test indicates that either the test assumptions were not correct or the instruments were at fault, or both.*

NRC

* A successful verification test does not necessarily mean

ARGUMENT

I. THIS COURT HAS JURISDICTION TO REVIEW THE DENIAL BY THE NUCLEAR REGULATORY COMMISSION OF THE 2.206 PETITION

The NRC has argued that this court does not have jurisdiction to review the NRC's denial of the 2.206 Petition on the ground that this decision was one "committed to agency discretion by law" and thus unreviewable pursuant to 5 U.S.C. §701(a)(b). In support of this argument the NRC cites *Heckler v. Chaney*, 470 U.S. 821 (1985).

Chanet involved the refusal of the Food and Drug Administration (FDA) to take investigative or enforcement action in response to a petition by prisoners under sentence of death that the use of certain drugs to execute them would be a violation of the Food, Drug and Cosmetic Act (FDCA). The FDA commissioner responded to the prisoners' petition by questioning whether the FDA had jurisdiction in the area, noting the substantial interference with state criminal justice system that would be caused if the FDA became involved, and concluding that even if there were jurisdiction still the FDA would exercise its discretion to decline to pursue enforcement. The prisoners sued, and the Supreme

---

that the test assumptions were correct. See Reytblatt, 1983 report, pp. 14-15 (App. pp.137-138)

Court granted certiorari "to review the implausible result that the FDA is required to exercise its enforcement power to ensure that states only use drugs that are 'safe and effective' for human execution." 470 U.S. 827. *Chaney* therefore involved a situation where the agency made no factual investigation of the claims, made no determination whether the claims were in fact a violation of the FDCA, and concluded that, even if the Petitioners' allegations were true, it would decline to take enforcement action.

The fact situation here is totally different. The NRC has, at various times, investigated the claims made in this Petition and has, after a fashion, initiated enforcement action, though not formal action pursuant to 10 CFR 2.202. In DD-84-6 the Commissioner noted that NRC staff had reviewed documents referenced in the petition, was aware of Dr. Reytblatt's work on leak testing methodology mentioned in the Petition, and stated that "(t)he NRC has pursued the ILRT matter and the records involved and assured itself that the Commission's regulations are being met." (App. p.114) As a result of the petition in DD-85-2, the NRC undertook regional inspection activities which, together with the affidavit of Dr. Reytblatt, did identify deficiences in the 1981 and 1983 Zion tests, and led to the temporary shut down of that facility. (App. p.99-100) In DD-85-10 the NRC reviewed the circumstances of the Jly. 1984 Zion leakage and verification tests and concluded that the tests were acceptable. Subsequently, the NRC convened a public meeting on October 17, 1985 (a transcript of this meeting appears in

the record) for the purpose of "engag(ing) Z. Reytblatt in a constructive technical review of his comments..." (App., p.34). In the process of preparation of 87-02 the NRC forwarded the Pettition to CECo for its comments (Appendix pp.44), reviewed the tests referred to by Dr. Reytblatt in the Petition, and concluded that the Petitioner's claims had no safety or technical merit.

Therefore, this is not a case where an agency has declined enforcement action because of an assessment "whether agency resources are best spent on this violation or another whether the agency is likely to succeed if it acts, whether the agency has enough resources to undertake the action at all." *Heckler v. Chaney*, 470 U.S. 821, 831. Rather this is a case where the agency has investigated and has determined that, based upon its view of the facts, no violation has been shown. This Petition challenges this decision as arbitrary and capricious. This is not a case, however, where, if the violation were established, the NRC would decline to take enforcement action (see DD 85-2).

In addition to the vast differences in the underlying facts between *Chaney* and this Petition, the cases are also distinguishable legally.

The Atomic Energy Act of 1954, 42 U.S.C. §2011 et seq., established the Atomic Energy Commission, now the NRC, with power to license and regulate the commercial utilization of nuclear energy, and with the duty to ensure adequate protection for the health and safety of the public. 42 U.S.C.

§2232(a), §2133(b)(d). The NRC has determined that operation of a commercial reactor without an effective containment system would breach that duty to ensure the public's health and safety, and has, therefore, made it mandatory for all such reactors to be surrounded by a containment system, adequacy of which must be regularly tested. 10 CFR §50.34(a); 10 CFR Part 50, App. A, Criterion 50; 10 CFR Part 50, App. J. The regulations provide that the NRC may revoke a license for any reason that would warrant a refusal to grant a license on an original application (10 CFR 50.100), and that in initially deciding to grant a license, the NRC will consider that the health and safety of the public will not be endangered. [10 CFR §50.40(a)]

There is, therefore, a comprehensive statutory scheme which mandates that the health and safety of the public be protected through provision of a leak-tight containment system. An effective containment system is not some idealistic exhortation to be achieved only in the abstract but a realistic achievable protection for members of the public.

The majority opinion in *Chaney* held that an agency's decision not to take enforcement action is presumptively unreviewable by the courts, but that this presumption may be rebutted where the substantive statute has provided guidelines for the agency to follow in exercising its enforcement powers, such as where Congress has set substantive priorities, or has otherwise circumscribed an agency's power to discriminate among issues or cases it will pursue. *Chaney, supra*, at 833. The *Chaney* court was concerned that mean-

ingful review of an agency decision is impossible where there are no manageable standards for judging how and when an agency should exercise its discretion. *Chaney*, at 830.

In the Atomic Energy Act Congress clearly put a premium upon safety and mandated that nuclear power generation be undertaken with full regard for the health and safety of the public. The NRC has translated this concern into practical rules, which, among other things, mandate that there must be effective containment systems. There is, therefore, no problem in this case in determining what law should apply. The NRC's decision can be evaluated on the merits of its determination that the technical concerns expressed in the Petition are unfounded. If the agency's decision approving the testing procedures is not arbitrary and capricious nor an abuse of discretion then the Petitioner loses. If the Petitioner can demonstrate that the defects in the procedure are real and substantial and that therefore the adequacy of certain containment systems has not been successfully demonstrated, then the agency's decision should be reversed.

Since *Chaney* many courts have determined that an agency's failure to act can be judicially reviewed under an abuse of discretion standard.

In *Cardoza v. Commodity Futures Trading Commission*, 768 F.2d 1574 (7th Cir. 1985), this Court decided that a decision of CFTC to exercise its discretion not to review a decision of the Chicago Board of Trade was reviewable by the

courts. The Court found the case to be similar to Chaney in that "as in *Chaney*, Congress granted an agency authority to exercise discretion in a decision making capacity," 768 f¿2d 1548, but noted that the presumption of unreviewability could be "rebutted or overcome by a showing that "there 'is law to apply' " or that Congress " has indicated an intent to circumscribe agency enforcement discretion, and has provided meaningful standards for defining the limits of that discretion," (quoting *Chaney*, 470 U.S. at 534). The court then "read *Chaney* solely as reaffirming the recognized position that (5 U.S.C.) §701(a)(2) applies in certain circumstances where courts are unqualified to decide whether an agency has abused its discretion." 768 F.2d 1549, and held that "the Court is qualified to review the agency action in question and such CFTC denials of review are not unsuitable for judicial scrutiny." 768 F.2d 1549.

In another post-*Chaney* case, *Anacoso-Sanchez v. INS*, 779 F.2d 1260 (7th Cir. 1985), the Court again analyzed *Chaney* as holding that when there is no law to apply, "judicial review is exceedingly constricted." 779 F.2d 1265. In *Anacoso* the court held that judicial review of a refusal by INS to reopen a case and grant adjustment of status was impractical since, "because there are no rules of law here, courts cannot review 'the merits' of the decisions. There is no standard by which a court may conclude that a failure to be lenient was error." 779 F.2d 1265. The court held, however, that review would be available if the agency "acts for a forbidden reason or for a reason that a court **can** determine

is erroneous." 779 F.2d 1265 (emphasis in original).

This Court has also held that *Chaney* does not prevent inquiry into whether a refusal to investigate was unreasonable. In *Northern Indiana Public Service Co. v. FERC*, 782 F.2d 730 (7th Cir. 1986) this Court sustained a challenge to the failure of FERC to investigate possible price manipulation by gas companies, citing *Cerro Wire v. FERC*, 677 F.2d 124, 128 (D.C. Cir. 1982) for the proposition that a refusal to investigate may only be reversed if it constitutes an abuse of discretion, and holding that the FERC "cannot essentially abandon its regulatory function... under the guise of unreviewable agency inaction." 782 F.2d at 745.

In a number of other cases after *Chaney* courts have considered challenges to an agency failure to take proper enforcement action. In *Heterochemical Corporation v. FDA*, 644 F.Supp. 271 (E.D. N.Y. 1986) the petition brought suit to compel the FDA to take action against distributors of unauthorized animal feed additives. The court distinguished *Chaney*, noting that in *Heterochemical* the agency had investigated a possible violation of the FDCA and had evaluated those posible violations over a seven year period. The court pointed out that "where *Chaney* dealt with an initial decision not to commit agency resources, here, the FDA did commit agency resources, carrying out an investigation and publishing its findings" (644 F.Supp. at 274), and suggested that this made it appropriate to review the FDA's assertion that no violation existed to determine whether that assertion was arbitrary and capricious.

In *Sierra Club v. Block*, 615 F.Supp. 44 (D. Col. 1985), the Court refused to dismiss a petition which sought to force the Department of Agriculture to claim federal reserved water rights in wilderness areas. The court noted that the *Chaney* court acknowledged that "Congress did not set agencies free to disregard legislative direction in the statutory sceme that the agency administers," *Chaney* at 821, and held that the Wilderness Act, 16 U.S.C. §1131, which directed that wilderness areas shall be administered so as to ensure their protection and preservation, provided sufficient direction that the court could judge the merits of the agency's failure to act.

In the instant Petition it is clear that the Congress, and the agency *, have mandated that the nuclear power plants shall be operated safely and shall have effective containment structures and that there is adequate law for the court to apply.

It should also be noted that the courts have, for a number of years, reviewed NRC failures to act and have encountered no great obstacles in finding and applying law. See, e.g., *Seacost Antipollution League of New Hampshire v. N.R.C.*, 690 F.2d 1025 (D.C. Cir 1982) (reviewing an or-

---

* The agency's regulations may provide sufficient law for the court to apply. See, *Service v. Dulles*, 354 U.S. 363 (1957); *Robbins v. Reagan*, 780 F.2d 37 (D.C. Cir. 1985); *Cardoza v. CFTC*, *supra*, at 1550; *Heterochemical v. FDA*, *supra*, at 274.

der of the NRC refusing to order a hearing an revocation of construction permits); *Natural Resources Defense Council v. NRC*, 606 F.2d 1261 (D.C. Cir. 1979) (reviewing a decision of the NRC that it did not have licensing jurisdiction over certain nuclear waste storage tanks); *Nader v. NRC*, 513 F.2d 1045 (D.C. Cir. 1975) (Denial of a shutdown petition); *County of Rockland v. NRC*, 709 F.2d 766 (2nd Cir. 1983), cert. denied 104 S.Ct. 485 (review of refusal of NRC to grant 2.206 petition); *Rockford League of Women Voters v. NRC*, 679 F.2d 1218 (7th Cir. 1982) (review of NRC refusal to institute construction permit revocation proceedings); *Illinois v. NRC*, 591 F.2d 12 (7th Cir. 1979); *Porter County Chapt. of Izaak Walton League of America, Inc v. NRC*, 600 F.2d 1363 (D.C. Cir. 1979).

II. THE NUCLEAR REGULATORY COMMISSION DECISION THAT THE ZION WEIGHTING COEFFICIENTS DID NOT AFFECT THE RESULT OF THE LEAK RATE TESTS WAS ARBITRARY AND CAPRICIOUS.

The Petition complained that certain assumptions substantially used during the Zion leak rate tests of 1982, 1983 and specifically 1984 were obviously incorrect. For example, temperature sensors that were irregularly placed in the Zion containment subvolume 7 were assigned the equal weighting coefficients.

If temperature sensors which in fact represented unequal

volumes of gas are considered to represent equal volumes, the resultant average temperature of the subvolume will be incorrect. Since the gas mass is calculated from subvolume temperatures and pressure, if the weighting coefficients are wrong, then the mass will be wrong also. Thus the leak rate rate will not be calculated correctly.

The NRC in its decision did not deny that the Zion coefficients were incorrect but claimed that the wrong weight coefficients would not substantially affect the test results when the testing conditions are "stabilized." This decisio was arbitrary and capricious since the materials submitted to the NRC conclusively established that the wrong weight coefficients could substantially change the "calculated" leak rate to allow misrepresentation of a leaking containment system as tight.

In the report "Critique of Containment System Leakage Rate Test Requirements" authored by Dr. Reytblatt and submitted to the NRC in 1983 by the Oak Ridge Laboratory, at pages 13-14, (App. pp. 136-137) an example shows that a leak rate 44 times higher than allowable at Zion could be easily misrepresented as an allowable leak rate by changing slightly the weighting coefficients. In this example the temperature variations were higher than usually encountered but were consistent with the range observed at D.C. Cook plant in Michigan and were two times higher than those observed at LaSalle 1982 test *. The leak rate was calculated

* If LaSalle data were used then a leak rate twenty times

twice with different weight coefficients assigned to each of the three sensors in each calulation *. In one instance all sensors were assigned equal weighting coefficients (1/3). In another, two sensors were given 1/4 and the third 1/2 weighting coefficients. The resulting leak rates were .06 %/day (where all sensors were assigned equal weighting) and 4.44 %/day in the second instance. If the second set of weighting coefficients were correct, a real possibility, then using the first, incorrect, set would have resulted in a conclusion that the containment was leak proof whereas in fact it was substantially leaking.

Subsequently, at a public meeting held on October 17, 1985, Dr. Reytblatt presented another example to the NRC, this one based on real weight coefficients and real temperature variations observed at LaSalle in a 1982 test. The results show, in attachment figure 2.7 of Reytblatt, four sensors with the CECo assigned weighting coefficients of 0.105 whereas the realistic coefficients were about 0.07, 0.14, 0.09, and 0.12.** In the absence of complete LaSalle data the selected data supplied by NRC were used with respect to the temperature changes. The maximum subvolume aver-

---

higher than the allowable Zion rate would have been misrepresented as satisfactory.

* The number of sensors might be as well as thirty located in the three subvolumes by groups of ten, with the subvolume temperatures as stated in the report.

** These realistic coefficients were estimated using the theory of numerical evaluation of multiple integrals and were not contested by the NRC.

age temperature change was in excess of 15^0 but for example only 10^0 was selected. The question of a possibility of temperatures moving in different directions in the same subvolume was initially diputed at the meeting, however, a consensus was that such changes might occur.* With the assumption that such changes occurred only at two locations, it was established by calculations that the leak rate would have been underestimated using CECo assumptions by .14 %/day, which is more than the total allowable Zion leak rate. Obviously, incorrect weighting coefficients of other sensors in other subvolumes could have either increased or decreased the error. This explains why some of the NRC presented examples showed error in leak rate which was not critical.**

While not denying that the Zion weighting coefficients were incorrect, the NRC asserted that due to stabilized conditions the effect of this should not be significant. It should be noted that the examples presented at the meeting were under stablized conditions as defined in ANSI/ANS 56.8-81. It was shown in detail at the meeting (Mtg., pp. 99-

---

* For example, the sensor No.2 (which was cooling) might have been located near the reactor (cooling "hotspot"), whereas the sensor No.1 (which became hotter) might have been located near the containment wall, exposed to intense solar radiation.

** In response to FOIA requests the NRC denied ever possessing the data which they claimed to have used for their examples. See letter with NRC 7/11/86.

100) that "stabilizing" may be totally irrelevant to the test results, may bar a good containment from testing, or may help to misrepresent a leaking containment as a good one. These conclusions were not responded to by the NRC at the meeting or at any other time.

In DD-87-02 the Director merely referred to his prior decisions in attempting to answer the claims of the Petition with resoect to incorrect weighting coefficients. In DD-85-10 the Director stated only that "a properly conducted leak rate test would not contain the types of deficiencies alleged by the Petitioner such as the use of ujustified weighting coefficients."(App. p.83) DD-85-02 contains no discussion whatsoever of incorrect weighting coefficients. DD-84-06 states only that "a properly conducted test would not likely be flawed by the types of deficiences alleged in the Petition such as ....the use of unjustified weighting coefficients."(App. p.112).

It is clear, therefore that the use of proper weighting coefficients is crucial to leak rate testing and the problems identified and presented in this and prior Petitions have never been adequately addressed or responded to by the NRC. It is important that the NRC issue an Order To Show Cause upon CECo requiring that it demonstrate the acceptability of the coefficients used in its leak rate tests.

III. THE DECISION BY THE NUCLEAR REGULATORY COMMISSION NOT TO ISSUE AN ORDER TO SHOW CAUSE UPON COMMONWEALTH EDISON COMPANY TO DEMONSTRATE ACCEPTABILITY OF ITS COMPUTER PROGRAMS WAS ARBITRARY AND CAPRICIOUS.

The petition complained that certain options in computer programs used to calculate the containment leak rate allow for deletion/or alteration of the data. Specifically, ERASE, WIPE and similar options are capable of deleting the data recorded from certain sensors and replacing actual readings by something else. This claim was supported by a letter from Professor Kenevan, and detrimental effects of such actions demonstrated in Dr. Reytblatt's affidavit.

A typical option of this kind may eliminate, for the purpose of calculation, any given data set, at the whim of the operator. Typically, the next numbered set then replaces the erased data set (e.G. the fifth set will replace the fourth, etc). In some instances, the numbers assigned to the sensors do not correspond to their consecutive physical location, or by a combination of data from other locations, which would mean substitution of the real data by garbage.

Such options have in fact been used during the 1983 Zion test, 1982 LaSalle test (Mtg. pp.44-45), and very probably in other tests also. The NRC in its decision acknowl-

edged the existence of such or similar options. However, without any proof, the NRC asserted that the procedure implemented in such options is acceptable. The only record identified by the NRC as being used to arrive at this decision, according to FOIA response, is the CECo document of October 27, 1986 (App. p. 156) which will be discussed below.

The result of application of these options is the assignment of a zero weight coefficient to the readings from the deleted sensor, and a substantial increase in a weighting coefficient of the sensor whose readings are replacingdeleted sensor. As shown above, changes in the weighting coefficient of much smaller magnitude may cause drastic changes in calculated leak rate rate. Obviously, such large changes as these options actually perform may be detrimental to the accuracy of leak rate testing.

The CECo document, at point 6, acknowledges that "the change in calculations is equivalent to a change in subvolume configuration," that is, to changes in weighting coefficients. The document asserts the right of the utility company to arbitrarily change the weighting coefficients: "Since that configuration was set by the utility in the first place, there is no reason why it cannot be changed by the utility, so long as a legitimate reason for doing so exists." The utility refers to no rule or law that would list possible "legitimate reasons." Such "legitimate" reasons simply do not exist.

The utility is incorrect in stating that the current regulations set forth no limit on weighting coefficients. The

utility was allowed to use the ANSI/ANS 56.8-81 standard, on an exemption basis, for its testing. Section 4.4.2.1. of the standard requires that "sufficient sensors shall be installed so that no one sensor has a volume fraction greater than ten per cent during the test." Renumbering, the deletion of certain sensors and their replacement by others, may increase beyond 10 per cent the volume fraction assigned to one sensor, thereby violating this section.

The NRC statement that such options may have legitimate uses is indisputable. For example, one use would be to assist the parametric studies using archived data. However, as shown above use of such options in actual testing may underestimate the real leak rate by a factor of ten or more.

What is legitimate in one application may not be legitimate in another. The petition requested that these options be eliminated from leak rate calculations during the testing, not that they be totally banned in any circumstances. There is no objection to the use of these options in other than the specified application. It is undisputed that the CECo computer programs allow alteration of the data, disguised as alteration of subvolume configurations, for the purpose of leak rate calculations. It has been demonstrated that such alterations may have a detrimental effect on the leak rate calculation. No applicable regulation allows such manipulations. The NRC should have ordered CECo to show cause why it had the right to use a computer program which allowed it to arbitrarily manipulate subvolume configurations during the test.

IV. THE NRC DECISION THAT THE ZION, 1984, TEST COMPLIED WITH THE REGULATIONS WAS ARBITRARY AND CAPRICIOUS

The petition complained that the main normal duration integrated leak rate test at the Zion, Unit 1, containment system of July, 1984, was immediately followed by a failed verification test, and therefore was not a valid test. The Petition further complained that subsequent main test which was immediately followed by a successful verification test, was of a short duration, and therefore, was not valid either.

No regulation allows combining two invalid tests into one valid test. Petition requested that the NRC issue an Order to Show Cause upon CECo to demonstrate why two invalid tests are equivalent to one valid test.

The NRC in its decision declined to discuss the matter referring to its earlier decision DD-85-10. In DD-85-10 the NRC agreed with the facts as stated above and provided two arguments: 1) that it suspected that the failure of the verification test following the normal duration test was caused by a deficiency in a supplementary instrumentation, and not because the assumptions of the main test were invalid: and 2) that the short duration of the second test was allowed because the test intermediate results were similar to those obtained in the first main test (of normal duration).

In his letter to the Commisioner of July 31, 1985 Dr. Reytblatt pointed out that the Commission had presented

no proof of its first assertion. Moreover, one of the duties of both the utility and the NRC should have been performance of the second verification test with the same parameters as had been selected for the first (failed) verification. However, CECo-NRC conducted the second (passing) verification test using totally different parameters.

Thus their attempt to explain the failure of the verification test by reasons other than the generally recognized reasons of wrong weighting coefficients, is unsuccessful.

In view of so-called "diurnal effects" the NRC contention that the illegal short duration main test would produce, if allowed to continue, essentially the same results, is pure speculation. "Diurnal" effects have been clearly exhibited in numerous leak rate tests and are caused, primarily, by the wrong assumptions on weighting coefficients (which was, precisely, the case with the Zion tests). Because of the ambient temperature daily periodic fluctuations, the (wrongly) "calculated" gas mass within the containment periodically "increases" and "decreases." Of course, nothing of the sort occures with the real mass, but by manipulating the test duration and timing, the "calculated" leak rate can be made substantially lower than the actual leak rate.

It was therefore unreasonable for the NRC to combine two invalid tests and and proclaim the acceptability of the containment system.

CONCLUSION

The NRC decision in this case was flawed from its initial misinterpretation of the petition to its eventual refusal to initiate enforcement proceedings. This refusal was arbitrary and capricious and this matter should be remanded to the NRC with instructions to issue a Rule to Show Cause upon CECo, as requested in the Petition.

Respectfully submitted,

JOHN L. STAINTHORP
343 S. Dearborn St.
Suite 1607
Chicago, Illinois 60604
312-663-5046
Attorney for Petitioners

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCEAR REACTOR REGULATION
Harold R. Denton, Director

In the Matter of

	Docket Nos. 50-295
COMMONWEALTH EDISON COMPANY	50-373
(Zion Nuclear Unit 1)	STN 50-454
(Byron Nuclear Unit 1)	
(LaSalle Nuclear Unit 1)	(10CFR §2.206)
AND ALL LIGHT-WATER REACTORS	

DIRECTOR'S DECISION UNDER 10 CFR §2.206

INTRODUCTION

An emergency relief Petition dated August 13, 1986 sponsored by a number of individuals (petitioners) was submitted to my office pursuant to 10 CFR §2.206. The Petitioners sought suspension of operating licenses for the Zion Nuclear Unit 1, LaSalle Nuclear Unit 1, and Byron Nuclear Unit 1, facilities of the Commonwealth Edison Company (CECO) and other similarly situated facilities due to alleged inadequacies in containment integrated leak rate test (CILRT) practicies. It was alleged that the testing was at

variance with the Commission's requirements for a CILRT, specifically 10 CFR Part 50, Appendix J. It was alleged that there were deficiencies in computer programs used during the testing and that certain data were improperly replaced by other data, allegedly in violation of the Commission's requirements.

I acknowledged receipt of the Petition in my letter to certain Petitioners dated October 22, 1986. In that letter, I also addressed the Petitioners' request for emergency action. I declined to take any immediate action with respect to the facilities referenced in the Petition based upon the close monitoring of CILRT's at commercial nuclear facilities by NRC inspectors and the confirmatory calculations that are routinely performed by the NRC with respect to these tests With respect to the facilities referenced in the Petition, I noted that NRC inspection reports had been issued describing the CILRT's which have been performed and, based upon this NRC surveillance of the testing, I saw no need to take any emergency action as requested in the Petition. I noted that the NRC staff would continue to review the Petition and that I would issue a formal decision with regard to it in the reasonably near future. My decision follows.

DISCUSSION

The Petition contains a number of issues with respect to containment integrated leak rate testing. The issue may be broadly placed into three categories: (1) allegations regarding the general methodology associated with CILRT's,

(2) allegations concerning the validity of certain CILRT's performed at the Zion Nuclear Power Station, Unit 1, in 1982 and 1984, and (3) allegations related to certain computer programs employed by CECO in conducting CILRT's for the Zion, LaSalle and Byron Units.

I have had the opportunity to examine and evaluate allegations in the first two categories in responding to previous Petitions pursuant to 10 C.F.R. §2.206.[1]

In DD-84-6, *supra*, I addressed allegations that there were serious errors defects and loopholes in the industry standards which provide detailed measures for performing the CILRT equired by 10 C.F.R. Part 50, Appendix J. [2]

---

[1] Previous Decisions which I have issued regarding the adequacy of containment integrated leak rate testing in general and, more specifically, with regard to certain facilities of Commonwealth Edison Company include: Commonwealth Edison Company (LaSalle County Station, Unit 1 & 2) and All Light-Water Reactors, DD-84-6, 19 NRC 891 (1984); CECO (Zion Nuclear Station, Unit 1), DD-85-2, 21 NRC 270 (1985); CECO (Zion Nuclear Station, Unit 1) and All Light-Water Reactors, DD-85-10, 22 NRC 143 (1985)

[2] The industry standards are specifically the American Nuclear Society (ANS) Standard N45.4-1972, "Leakage Rate Testing Of Containment Structures For Nuclear Reactors" and the American National Standards Institute (ANSI)/ANS Standard 56.8-81, "Containment System Leakage Testing Requirements."

The specific alleged defects which I addressed in that Decision included:

(1) the equation used to calculate containment air at any given point is wrong;

(2) the final calculated leakage rate may be "fudged" in a variety of ways to presumably yield an invalid leak rate; and

(3) there are "loose" requirements for the permanent archiving of raw test data and other data essential for test evaluation.

In concluding in that Decision that these so-called defects did not call into question the adequacy of the Commission's regulations with regard to CILRT's, I considered the claims of Zinovy Reytblatt which were offered in support of the Petitions discussed in that Decision. I note this fact since Z. Reytblatt is a co-sponsor of the same allegations put forth in this latest Petition pursuant [to] 10 CFR §2.206. See Exhibit A to the Reytblatt affidavit attached to instant Petition. In sum, after considering the allegations raised in the earlier Petitions including the claims of Z. Reytblatt, I concluded that current regulayion regarding CILRT's of commercial nuclear facilities provided reasonable assurance that the public health and safety was adequately protected. As the claims in the current Petition with respect to containment integrated leak rate testing methodology are essentially repetitive of those I already have considered, I do not intend to discuss them further.

With respect to the second category of allegations, specifically those dealing with the adequacy of a CILRT performed at the Zion Nuclear facility, I have considered the adequacy of containment leak rate testing for the Zion facility in two Director's Decisions, specifically DD-85-2 and DD-85-10, *supra*. In DD-85-2, I noted that Regional inspection activities undertaken as a result of the Petitioner's allegations in this matter, which were also supported by an affidavit of Z. Reytblatt, identified deficiences in the CILRT performed for the Zion nuclear facility in 1981 and 1983. As a cosequence, CECO shut down the Zion facility and performed a valid CILRT, which were witnessed by Region III inspectors.

On March 6, 1985, Z. Reytblatt himself submitted a Petition to my office pursuant to 10 C.F.R. §2.206 regarding CILRT's. New issues raised in that Petition concerned alleged inadequacies in certain software used by licnsees to conduct CILRT's. Reytblatt suggested that such software might have been used with respect to Zion Unit 1 leak rate testing. The Petitioner also made allegations concerning the validity of the verification test performed for the July 1984 Zion CILRT.

In DD-85-10, the NRC determined that the software identified by Petitioner had never been used for the CILRT for Zion. With respect to the Petitioner's concerns regarding the July 1984 Zion Unit 1 CILRT, the staff reviewed the Petitioner's concerns and concluded that, contrary to the assertions of the Petitioner, an appropriate test was conducted. With respect to the Petitioner's claims that an invalid ver-

ification test was conducted, NRC inspectors reviewed the circumstances of the verification test and concluded that the test did confirm the acceptability of the CILRT performed for Zion Unit 1. Thus, concerns raised in this most recent Petition with respect to the methodology employed for the Zion CILRT have already received NRC consideration and I do not intend to discuss them further in this decision.[3]

The remaining allegations in the instant Petition specifically allege that there were deficiencies in the computer programs used during integrated leak rate testing at CECO nu-

---

[3] The Petition also makes reference to a public meeting held on October 17, 1985 at the NRC's Region III Offices. The October 17, 1985, meeting was held in an attempt to engage Z. Reytblatt in a constructive technical review of his comments as he had requested. The Petition and specifically the affidavit of Reytblatt and its Exhibit D appear to suggest that the NRC represented at this meeting that a technical review would be conducted and that review never occurred. Such a suggestion is incorrect. At that meeting, as Exhibit D correctly reflects, the NRC staff represented that it would study the entire record of the meeting and would correspond with Z. Reytblatt. This in fact occurred. On November 18, Mr. Robert Bernaro of the NRC staffcorresponded with Z. Reytblatt and provided him with the staff's assessment of the October 17, 1985 meeting. To the extent the Petition asserts that the NRC staff did not review the matters raised at the October 17, 1985 meeting and did not so inform Z. Reytblatt, those assertions are incorrect.

clear power plants in that certaintest data were improperly replaced by other data. An affidavit from Z. Reytblatt (Associate Professor at the Illinois Institute of Technology) submitted with the Petition in support of the allegations purports to show that subroutines of CECO computer programs can replace actual test data with other data, and that such manipulations have taken place in violation of the Commission's CILRT requirements, as confirmed by actual computer output. A letter from J. Kenevan (Associate Professor at the Illinois Institute of Technology) is also submitted in support of the Petition.

The letter from J. Kenevan, dated July 7, 1986, addresses the data storage properties of a computer code which apparently was used by CECO in the conduct of the CILRT at the Byron Station. The letter observes that two program options, namely 'EDIT DATA' and 'DELETE DATA FILE', when invoked, result in modification of the data saved, and that with regard to the latter option, the program leaves no record that data has been deleted. Although J. Kenevan's brief statement is probably a factual assessment of the program capability, it also expresses what one would intuitively expect a data gathering computer program to offer in the way of options. Nevertheless, in the context of the Petition, as discussed more fully below, the implication is that the program options are provided for the express purpose of malicious falsification of the test record. On the contrary, the subject options are a necessary part of the program; they literally permit the compilation of bona fide test data. Thus,

the Kenevan letter does not substantiate the allegations in the Petition.

The affidavit of Z.Reytblatt alleges that the CECO computer programs contain options (specifically an option called 'ERASE' or 'WIPE') to permit test data to be manipulated. and attempts to show with the aid of test data that inappropriate data manipulation in fact occurred. The affidavit includes two Exhibits (B and C) which contain background information to support statements made in the body of the affidavit.

The affidavit claims, in part, that the CECO computer programs contain an option that permits the discarding of data at the whim of the testing group, leaves no record that data was deleted and places no limitations on the use of the option. Exhibit B of the affidavit is referenced to support this claim. Exhibit B consits of excerpted pages from a CECO program, which identifies the existence of an option (called 'WIPE') that supposedly permits such data manipulation. [4]

---

[4] The Petitioners also used the 'WIPE' option issue to claim that the data for the 1983 Zion 1 CILRT was fraudulently manipulated to obtain a negative leak rate. A negative leak rate, per se, is not indicative of a fraudulently conducted test, or a failed test. Rather, if the leak rate fluctuates around the zero mark it is indicative of the exceptional leak tightness of the containment, and reflects the statistical nature of the test data. Even though the Zion 1 measured

All of the CECO programs contain an option of the type referred to above. Such an option has legitimate uses. The option may be used to purge erroneous data from storage, i.e. sensor data that may have become garbled in transmission to storage memory. The storage may also be used to clear the storage memory prior to the start of an actual test, and to facilitate the performance of parameter studies using archived data. The Petition is incorrect in stating that the program leaves no record that the data was deleted. The fact that data has been deleted can be readily ascertained by examining the time intervals between data sets. The time at which a data set is obtained is not altered by the 'WIPE' option. Therefore, since data is acquired at prescribed, uniform intervals, missing data sets are easily detected. With respect to Petitioner's claim that there are no limitations on the use of this option, it should be noted that current regulations are silent on the matter of the degree of data rejection. Thus, the Petitioners are incorrect when they claim that current regulations do not allow discarding more than 5% of the test data. There are instances when data may be properly discarded.[5] Exhibit B contains a comment statement that addresses the provision in the code for dealing

---

leak rate was slightly negative, test acceptance is based on the upper 95% confidence limit, which was a positive value. This leak rate value was more than a factor of 10 lower than the maximum allowable leak rate, which is itself set at 75% of the design leak rate.

[5] The Reytblatt affidavit contains unclear allegations concerning the rejection of CILRT data. The industry stan-

with bad sensor values within a subvolume. Data rejection is necessary when a malfunctioning sensor/channel is found. If, for example, a temperature sensor in a subvolume fails and is locked out, the remaining sensors are used to determine the average dry bulb temperature of that subvolume. In the extreme, if there are no temperature sensors remaining in a subvolume that are functional, then the average temperature of an adjoining subvolume is used. This will, then, necessitate adjusting the calculational procedure programmed into the code at the start of the test when all instrument channels were considered to be functioning properly to exclude the data from channels found unreliable. Alternatively, the test may be interrupted to reestablish an effective instrumentation system. Whatever the course of action taken by a licensee is, it must be justifiable to NRC inspectors.

The treatment of test in the manner described above is based on accepted engineering practice. The fact that a containment subvolume weighting coefficient could exceed 0.1, which the Petitioners claim is unacceptable, is not in viola-

---

dard (ANSI/ANS 56.8-1981), which Z. Reytblatt is apparently referring to, provides guidance on the rejection of containment air mass data and raw data on the functionally dependent parameters, and prescribes that the rejection of data should be documented. Adherence to this standard is not a regulatory requirement. Nevertheless, based on staff review of the CILRT's referred to by Z. Reytblatt, the utility's testing practices relative to data rejection are in keeping with this guidance.

tion of the requirements of Appendix J to 10 C.F.R. Part 50, or ANSI N45.4-1972. The regulations do not prescribe leak testing practices to this level of detail. Rather, the regulations emphasize the importance of stable containment test conditions; with appropriate stabilization, test results are relatively insensitive to wide variations in the magnitude of the weight coefficients. This has been shown to be the case in the October 17, 1985 meeting attended by Z. Reytblatt.

The Petitioners further charge that CECO computer program can be manipulated to reinstate previously discarded data. Exhibit C of the Reytblatt affidavit is provided to demonstrate that this has been done. Exhibit C presents data sets from the July 1984 Zion 1 CILRT which purportedly show that the readings from a "malfunctioning" sensor are suddenl declared valid. The Petitioners, however, errantly assumed that these data sets constituted bona fide data. On the contrary, they represent pre-test data obtained during the preparatory stages of the test. In fact, as the data clearly show, the containment was not yet pressurized for the test. Furthemore, the data sets show a sensor being returned to service in the data acquisition system which is compatible with pre-test activitiea. Consequently, Exhibit C does not support a claim that CILRT test data has been improperly manipulated.

The Reytblatt affidavit makes numerous assertions of impropriety which appear to evolve from an impecise understanding of the functions of certain options typically provided for data control in leak test computer codes, a mis-

interpretation of the information appearing on printouts of data sets and misunderstanding of regulatory requirements and industry guidelines. In any event, while staff does not review and approve computer codes used in the industry for the leak rate testing of containment structures, as noted above, the NRC inspectors carefully scrutinize all aspects of such testing and obtain raw data for analysis to independently assess the acceptability of leak rate test results. This have been done for each of the facilities identified by the Petitioners. NRC inspectors have observed CILRT's conducted by CECO and analyzed test data, and have found no evidemce of wrongdoing on the part of CECO. The staff concludes, therefore, that the Petitioner's claims have no technical or safety merit.

With respect to the technical assertions raised in this Petition and which were discussed above, the allegations raised in the Petition concerning the application of certain CECO computer programs to containment leak rate testing at CECO facilities are unsubstantiated. Rather, based upon CILRT's conducted by CECO for its LaSalle Zion and Byron facilities, and the independent review and oversight of these tests conducted by NRC inspectors, thes facilities conform to the Commission's requirements with respect to containment leak rate testing.

CONCLUSION

Based upon the unsubstantial nature of the technical assertions made by the Petitioners, the relief requested by the

Petitioners based on these assertions is denied. Specifically, I decline to require any further CILRT's at commercial nuclear power reactor facilities, nor is it necessary to shut down any facilities, or to undertake any studies and reviews such as those requested by Petitioners. Finally, with respect to the Petitioner's request that records from CECO CILRT's including raw data and computer programs, be made public documents, I have addressed this issue in previous Director's Decisions where the same relief had been requested.[6] I decline such relief now for the same reasons as were stated there.

For the reasons stated in this Decision, the Petitioner's request for action pursuant to 10 CFR §2.206 has been denied. As provided by 10 C.F.R. §2.206(c), a copy of this Decision will be filed with the Secretary for the Commission's review.

Harold R.Denton, Director
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland
this 10 day of February, 1987.

---

[6] DD-84-6, *supra*, 19 NRC 895-96; DD-85-2, *supra*, 21 NRC 272-73.